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(54) Abstract Title
Automated defence system

(57) A fully automated defence system having the capability to self-activate and self-launch self-guided sound missiles, which function in principle as microphones, (as both early warning systems and defensive destructive weapons) is disclosed. It is enhanced by the use of carrier drones to keep a selection of sound missiles constantly in the air cruising on a distant outer perimeter. The defence capability of the complex system can be supplemented by the use of sound missile launch batteries based on land or at sea along with the capacity for using individual sound missiles launched from aircraft, mobile vehicles, launch pads, or launch silos. The defence system is based on an ability of the integral technology to capture sound waves emitted by an object. These are transformed into sonic data and supplemented by use of digital images. The complex arrangement is supplemented solely for an action against inter-continental missiles with early warning imaging data received from defence satellites.

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"SOUND MISSILE DEFENCE SYSTEM"

TECHNICAL FIELD:

THIS INVENTION RELATES TO A FULLY AUTOMATED, LOW-COST DEFENCE SYSTEM COMPLEX, DESIGNED TO CARRY OUT A STRIKE BY MISSILES AGAINST WEAPONS RANGING FROM INTERCONTINENTAL BALLISTIC MISSILES - (IN CONJUNCTION WITH THE EARLY WARNING SATELLITE DEFENCE SYSTEM), TO (WITHOUT THE NEED OF ANY SATELLITE BASED DATA), MILITARY AIRCRAFT, ARMOURED MILITARY VEHICLES, WARSHIPS, AND NAVAL WEAPONRY. THE SOUND MISSILE SYSTEM IS ABLE TO EFFECTIVELY DEFEND A TERRITORY AGAINST ANY OF THE ABOVE.

IN ADDITION, IT PROVIDES A CONSTANT FLOW OF VALUABLE DATA AND INFORMATION WITH REGARD TO MOVEMENT OF CONVENTIONAL BATTLEFIELD WARFARE TECHNOLOGY, SUCH AS TANKS, ARMOURED VEHICLES, ETC. HOWEVER, ITS PRIMARY FUNCTION IS TO DEFEND AGAINST ALL TYPES OF MISSILE ATTACK, BE IT FROM BALLISTIC, CRUISE, OR ANY OTHERS. NO MATTER WHETHER THEY ARE LONG, MID, OR SHORT RANGE, THEY CAN BE DESTROYED, IN FLIGHT, ANYWHERE FROM THE STRATOSPHERE TO SEA LEVEL. IT IS ABLE TO STRIKE AGAINST FIGHTER JETS, BOMBER AIRCRAFT, MILITARY AIRCRAFT OF ALL KIND, ANY WARFARE EQUIPMENT WITH STEALTH TECHNOLOGY, AND PRACTICALLY ANY OTHER KIND OF WEAPONS.

AT THE HEART OF THIS SYSTEM IS A NEW CONCEPT OF SHORT TO MID RANGE DEFENCE MISSILE, FULLY ENCASED IN A SPECIALLY DESIGNED REUSABLE DRONE THAT FUNCTIONS AS AN AIR BORN MISSILE LAUNCH PLATFORM. EACH INDIVIDUAL (DRONE ENCASED) SOUND MISSILE FUNCTIONS, AND COORDINATES ITSELF WITH ALL THE OTHER DRONES/SOUND MISSILES POSITIONED IN THE DEFENCE PERIMETER, AT ALL TIMES. TO EFFECTIVELY DEFEND A TERRITORY SUCH AS THE UK IT IS ESTIMATED THAT ONE WOULD NEED APPROXIMATELY 50 DRONES/SOUND MISSILES IN THE AIR AT ANY GIVEN TIME. THESE WOULD CONSTANTLY FLY AROUND THE DEFENCE PERIMETER AT INTERVALS OF APPROXIMATELY 40 MILES. IN TIMES OF CRISIS, THE SYSTEM PERIMETER CAN BE IMMEDIATELY EXTENDED BY LAUNCHING ADDITIONAL DRONES/SOUND MISSILES, TO ACHIEVE EVEN GREATER EFFICIENCY.

THE DRONE/SOUND MISSILE IS FITTED WITH TWO DIFFERENT ENGINES. THE DRONE'S ENGINE IS A CLASSICAL THRUST TURBINE ENGINE WITH VERY LOW FUEL CONSUMPTION CHARACTERISTICS, ABLE TO ACHIEVE SPEEDS AROUND 400 MILES/HOUR. THIS ENGINE IS FITTED WITHIN THE FUSELAGE OF THE DRONE AND IS POSITIONED DIRECTLY BELOW THE SOUND MISSILE, ALIGNED TO THE CENTRAL AXIS. THE SOUND MISSILE MAY BE FITTED WITH A RANGE OF ENGINES. STANDARD MISSILE SOLID FUEL ENGINE IS PROPOSED. NEVERTHELESS, OTHER MORE EFFICIENT ENGINES CAN BE USED AS ALTERNATIVES,

SUCH AS, HYDROGEN THRUST ENGINES, PULSE PROPULSION ENGINES, ETC.

THE SOLID FUEL COMPARTMENT OF THE PROPOSED MISSILE ENGINE IS LOCATED WITHIN IT'S OWN FUSELAGE. THE SOUND MISSILE IS SURROUNDED BY A FREE SPACE OF A TUBULAR SHAPE. THIS SPACE HAS FOUR GROOVES (SEALED CUTS), POINTING INWARDS INTO THE FUSELAGE OF THE DRONE. THESE FUNCTION AS THE SOUND MISSILE FLAPS RETRACTION REPOSITORIES.

WHEN THE SOUND MISSILE IS LAUNCHED FROM WITHIN THE DRONE, ITS START SPEED IS THAT OF THE DRONE ITSELF. THAT IS 400-MILES PER HOUR. IT IS THEREBY CLEAR THAT THE SOUND MISSILE IS ABLE TO REACT TO ANY POTENTIAL THREAT OF AN ATTACK, IN A RAPID MANNER. THE SOUND MISSILE'S ACCELERATION TO THE DESIRED SPEED OF ROUGHLY MACH 3,5 WILL TAKE APPROXIMATELY 60% OF THE TIME THAT IS REQUIRED FOR A STANDARD "SURFACE-TO-AIR" TYPE MISSILE TO BE LAUNCHED, E.G., AS A DEFENSIVE COUNTER MEASURE FROM ANY GROUND BASED LAUNCH POSITION, THAT IS AROUND SEA LEVEL.

WHEN ONE, ADDITIONALLY, TAKES INTO CONSIDERATION THE FACT THAT THE SOUND MISSILE WILL BE LAUNCHED FROM AN OUTER DEFENSIVE PERIMETER POSITION, ITS DISTANCE TO THE SELECTED TARGET WILL BE SUBSTANTIALLY SHORTER THAN THE PREVIOUSLY QUOTED EXAMPLE. AS A RESULT, THE DRONE/SOUND MISSILE HAS NO NEED TO CARRY THE SAME SOLID FUEL PAYLOAD AS STANDARD TYPES OF (SAM) MISSILES. THE GENERATED WEIGHT SAVINGS ARE REPLACED WITH LARGER CAPACITY FUEL TANK FOR THE DRONE'S THRUST TURBINE ENGINE. THIS PROVIDES THE DEFENCE SYSTEM WITH THE ABILITY TO KEEP THE INDIVIDUAL DRONES, FITTED WITH THE SOUND MISSILES, AIR BORN FOR LONGER PERIODS OF TIME.

THE DRONES, THAT IN FACT FUNCTION AS AIR-BORN SOUND MISSILE LAUNCH PLATFORMS, FORM TOGETHER A PRECISELY PRE-DEFINED CIRCUMFERENCE AROUND THE DEFENDED TERRITORY. A SINGLE DRONE/SOUND MISSILE RESEMBLES, TO THE UNTRAINED EYE, THE STANDARD STRUCTURAL CONCEPT OF A NORMAL DRONE. HOWEVER, THE TRUE HIGH SPECIFICATIONS TECHNOLOGY IS HIDDEN WITHIN AND BEHIND THE FRONT GLASS HEAD SECTION. IN THIS GLASS-COVERED FRONT SECTION IS THE ACTUAL (SONIC VIBRATIONS, IMAGING ANALYSIS AND RECOGNISANCE) CENTRE. THIS IS THE ACTUAL "BRAIN" OF THE MACHINE.

A SECOND, PARALLEL, (IN SOME CASES A LAST RESORT) ANALYSIS AND RECOGNISANCE SYSTEM IS PROVIDED BY A DIGITAL IMAGING SECTION THAT IS POSITIONED INTERNALLY, ALONGSIDE THE FRONT POSITIONED SONIC VIBRATIONS ANALYSIS SECTION, AND ALL ITS FEATURES, FORMING THE COMPLEX RECOGNISANCE SYSTEM. THIS ADDITIONAL IMAGING ANALYSIS SECTION OF THE DRONE/SOUND MISSILE ALLOWS FOR OPTICAL RECOGNITION, AN EVENTUAL FINAL

CORRECTION, OR TARGET APPROVAL OF THE SONIC SYSTEMS. IT FUNCTIONS AS A DEFINITIVE FORM OF EITHER CONFIRMATION OF DESTRUCTION, OR AN ORDER TO MISS THE INTENDED TARGET THAT WAS THE SUBJECT OF THE DESTRUCTION ORDER.

NOT APPARENT TO ANY PERSON WHO IS UNFAMILIAR WITH THE STRUCTURAL DESIGN OF THE DRONE, A HOLLOW TUBULAR INNER SPACE FOLLOWS BEHIND THE FRONT GLASS COVERED SECTION UP TO THE END OF THE DRONE'S FUSELAGE. THIS TUBULAR HOLLOW SPACE FUNCTIONS SOLELY FOR THE PURPOSE OF STORING THE SHORT-MID RANGE SOUND MISSILE IN IT'S PRE LAUNCH POSITION. WHEN THE DRONE/SOUND MISSILE'S SYSTEMS REGISTER A HOSTILE OBJECT, THE DRONE TAKES A COURSE TOWARDS THE INTRUDER AND THEN FULFILS ITS LAST FUNCTION AS AN AIR-BORN SOUND MISSILE LAUNCH PLATFORM.

THE "OUTER" SECTIONS OF THE DRONE'S FUSELAGE, CONSISTING OF THE SPACE AROUND THE CENTRALLY ALIGNED SOUND MISSILE, FORM LARGE CAPACITY FUEL TANKS FOR THE DRONE'S ENGINE. THE REMAINING "FREE" SPACE LOCATED IN THE FRONT SECTION OF THE DRONE AND THE SOUND MISSILE IS PACKED WITH THE HIGHEST LEVEL OF TECHNOLOGY AVAILABLE FOR ANALYSIS OF THE RECEIVED SOUND WAVE VIBRATIONS, A SATELLITE RECEIVER UNIT, MAIN AND SECONDARY PROCESSOR UNITS, THE DIGITAL IMAGING UNIT, AN OPTICAL UNIT, COMMUNICATIONS TECHNOLOGY, ETC., WORKING CONSTANTLY TO ANALYSE THE INCOMING DATA.

ONE OF THE MAIN DIFFERENCES BETWEEN THIS MISSILE DEFENCE SYSTEM AND ALL OTHERS, PREVIOUSLY USED OR PLANNED TO BE USED IS THAT THIS SYSTEM IS NOT DESIGNED TO BE LAUNCHED AFTER A POTENTIAL THREAT HAD BEEN REGISTERED. THIS DEFENCE SYSTEM FORMS A DISTANT DEFENCE CORDON, AND FULFILS A PROTECTIVE SURVEILLANCE PURPOSE. IN FACT, IT COULD BE MORE PRECISELY DESCRIBED AS A DEFENCE SURVEILLANCE SYSTEM OR AN EARLY WARNING SYSTEM WITH DEFENCE AND STRIKE-IN-DEFENCE CAPABILITIES.

IN ADDITION TO ITS PRIMARY DEFENCE PURPOSE, THIS SOUND MISSILE SYSTEM HAS THE CAPABILITY TO ENHANCE INFORMATION FOR A NUMBER OF OTHER CIVIL PURPOSES. FOR EXAMPLE: ASSISTANCE IN DATA ANALYSIS WHEN TWO CIVIL AIRCRAFT ARE ON A COLLISION COURSE, (THIS ASSISTS ALL FORMS OF AIR TRAFFIC CONTROL). IT WILL REGISTER ANY "SOS", OR OTHER SIGNALS TRANSMITTED FROM ANYWHERE IN THE SYSTEMS RANGE, FOR EXAMPLE AT SEA. IT PROVIDES ADDITIONAL WEATHER ANALYSIS DATA DEPENDING ON THE SONIC VIBRATIONS, IMAGING DATA, ETC.

THE "CENTRAL BRAIN", (COMMAND CENTRE), OF THE DEFENCE SYSTEM IS TO BE LOCATED AS CLOSE TO THE GEOGRAPHICAL CENTRE OF THE PROTECTED TERRITORY AS ACHIEVABLE. THIS LOCATION IS TO BE CHOSEN SOLELY FOR ITS LOGISTIC POSITION AND PURPOSE. NO OTHER

ASPECT OF ITS LOCATION REQUIRES ANY CONSIDERATION. THE SOUND MISSILE DEFENCE SYSTEM AS A WHOLE IS A COMPLEX OF PRECISELY INTERACTING "FEATURES", WHEREIN EACH FULFILS ITS DEFINED PURPOSE. THE PURPOSES ARE KEPT INTENTIONALLY SIMPLE AND BASIC.

EACH OF THE SOUND MISSILES CAN BE USED EITHER INDIVIDUALLY OR IN A COMPLETELY DIFFERENT SETTING THAN THE ONE PROPOSED AS THE PRIMARY VERSION. MOBILE OR STATIONARY SOUND MISSILE BATTERIES CAN BE MANUFACTURED THAT WILL HOLD 2 OR MORE INDIVIDUAL SOUND MISSILES FOR THE PURPOSE OF DEFENDING A TERRITORY THAT DOES NOT POSSESS THE MAIN SYSTEM, OR SIMPLY AS A SUPPLEMENTARY FEATURE.

THE SOUND MISSILE LAUNCH BATTERIES WOULD BE ABLE TO TAKE ROUGH AIMING ALIGNMENT IN THE DIRECTION OF ANY TARGET THAT WAS DETECTED. THE SOUND MISSILE LAUNCH BATTERY WOULD REACT IN A FULLY AUTOMATIC MANNER. FOR EXAMPLE, ONCE AN ENEMY FIGHTER JET OR BOMBER PASSES OVER A POSITIONED SOUND MISSILE BATTERY THIS WOULD RESULT IN A SOUND MISSILE LAUNCH AND SUBSEQUENT ELIMINATION OF THE SELECTED TARGET. THE SAME APPLIES FOR ANY HOSTILE SOUND EMITTING TARGET WITHIN REACH.

THE SOUND MISSILE LAUNCH BATTERIES POSSESS A NUMBER OF IMPORTANT ADVANTAGES IN COMPARISON TO ANY STANDARD ANTI AIRCRAFT SURFACE-TO-AIR (SAM) MISSILE LAUNCHERS CURRENTLY IN USE. THE SOUND MISSILE LAUNCH BATTERY DOES NOT EMIT ANYTHING. THERE IS NO OUTPUT THAT CAN BE DETECTED BY ANY MEANS. THE SYSTEM WORKS ONLY ON BASIS OF INPUT AND DETECTS ANY SOUNDS THAT ARE WITHIN REACH. AN EFFICIENTLY MASKED SOUND MISSILE LAUNCH BATTERY IN THE TERRAIN CANNOT BE DETECTED BY ALMOST ANY HIGH-TECH EQUIPMENT. ONLY SUCH EQUIPMENT THAT IS ABLE TO DIFFERENTIATE BETWEEN THE TEMPERATURES OF THE LAUNCHER SURFACE AND ITS SURROUNDINGS, IN SOME LOCATIONS, MAY BE SUCCESSFUL. HOWEVER, EVEN THIS FACTOR CAN BE COUNTERED BY OTHER MEASURES.

THE SOUND MISSILE LAUNCH BATTERIES HAVE NO NEED FOR CLOSE CONTACT OPERATORS TO BE IN CONSTANT ATTENDANCE. IT IS SUFFICIENT FOR MILITARY PERSONNEL TO BE AVAILABLE, FOR MONITORING FROM A DISTANT LOCATION, AND ATTEND ONLY FOR SUCH PURPOSES AS RELOADING. THIS ENSURES THAT THE ENEMY CANNOT TAKE ADVANTAGE OF SYSTEMS THAT DETECT HUMAN BODY TEMPERATURE AS DIFFERING FROM THE SURROUNDINGS AND USE THIS TO LOCATE THE SOUND MISSILE LAUNCH BATTERIES. THESE MAY ALSO BE FITTED WITH LARGER, MORE EFFICIENT VERSIONS OF THE SONIC DETECTION, RECOGNITION, AND ANALYSIS DEVICES THAT ARE MOUNTED WITHIN THE SOUND MISSILE HEAD.

THEY MAY BE FITTED ON THE ACTUAL BODY OF THE BATTERIES, WHICH CAN BE DESIGNED, EITHER AS MOBILE OR STATIONARY. THIS

WOULD PROVIDE THE DEFENCE COMPLEX WITH EVEN GREATER EFFICIENCY AND PRECISION. ANOTHER ADVANTAGE IS THE RELATIVELY SMALL DIMENSION OF THE COMPLETE LAUNCHER UNIT THAT CAN BE DESIGNED SPECIFICALLY FOR THESE PURPOSES. ITS HIGH LEVEL OF MOBILITY IS AN ADDITIONAL ADVANTAGE. THE SOUND MISSILE LAUNCH BATTERIES CAN BE DESIGNED TO FIT ONTO A MILITARY VEHICLE OF A STANDARD SIZE; IN ADDITION, THEY CAN BE FITTED ONTO PRACTICALLY ANY NAVAL VESSEL.

INDIVIDUAL SHORT RANGE SOUND MISSILES OF SMALLER DIMENSIONS CAN BE MOUNTED AS SINGLE OR MULTIPLE UNITS ON ANY CARRIER PLANE, SUCH AS FIGHTER JETS, BOMBING AIRCRAFT OR MULTI PURPOSE MILITARY AIRCRAFT. IN THIS WAY, THE SOUND MISSILES MAY BE USED SIMPLY FOR THE SAME PURPOSES AS ANY CURRENTLY USED MISSILES, EITHER FOR DEFENCE OF THE ACTUAL AIRCRAFT AGAINST OTHER AIRCRAFT, OR AS A COUNTER MEASURE AGAINST SUCH WARFARE EQUIPMENT AS WARSHIPS, ETC.

THE COMMAND CENTRE INCORPORATES THESE FEATURES:

SATELLITE COMMUNICATIONS CENTRE AND RECEPTION UNIT FOR INFORMATION DATA GATHERED BY THE EARLY WARNING DEFENCE SATELLITES. COMMUNICATIONS CENTRE FOR PROVIDING CONSTANT INTERCHANGE OF DATA WITH THE DRONES/SOUND MISSILES TO BE ABLE TO CORRECT ANY IRREGULARITIES IN RESPECT OF THE PRECISE POSITION OF EACH DRONE WITHIN THE DEFENCE PERIMETER, AND TO ISSUE ANY OTHER NECESSARY ORDER. THE COMMAND CENTRE HAS ITS MINIATURE AIRFIELD TO PROVIDE FOR TAKE-OFF, LANDING AND REFUELLING OF THE DRONES/SOUND MISSILES.

SOLELY FOR THE PURPOSE OF EARLY DETECTION OF AN ATTACK BY INTERCONTINENTAL NUCLEAR BALLISTIC MISSILES, THE COMMAND CENTRE PASSES OVER THE SATELLITE DATA TO THE DRONES/SOUND MISSILES. THIS DATA THEN FORMS A PRIME ORDER TO RESPOND. IN ALL OTHER CASES, THE SOUND MISSILE DEFENCE SYSTEM OPERATES ON THE BASIS OF ITS OWN DATA GATHERING CAPABILITY.

IN THE ABOVE CASE, THE SATELLITE DATA AND PRIMARY TARGET COORDINATES WOULD BE IMMEDIATELY TRANSMITTED FROM THE COMMAND CENTRE TO THE DRONES/SOUND MISSILES, THAT FORM THE OUTER DEFENCE PERIMETER. THE COMMAND CENTRE MAY ALSO BE FITTED WITH A SERIES OF LARGER AND MORE EFFICIENT SONIC DETECTING DEVICES, TO PROVIDE ASSISTANCE TO THE COMPLETE SYSTEM AND THE DEFENDED OUTER PERIMETER. THE THREE CLOSEST POSITIONED DRONES/SOUND MISSILES TO THE TARGET ARE THEN DEPLOYED INTO A COUNTER ATTACK AGAINST THE HOSTILE OBJECT, TO THE PRIMARY TARGET COORDINATES RECEIVED FROM THE COMMAND CENTRE.

ATTACK SEQUENCES:

THE DEPLOYED DRONES/SOUND MISSILES LEAVE THEIR FIXED POSITIONS WITHIN THE DEFENDED CIRCUMFERENCE AND HEAD OUT IN THE GIVEN DIRECTION. AT THE POINT WHEN EACH OF THE DRONES ALIGNS ITSELF TO THE EXPECTED TARGET DIRECTION THE THREE SOUND MISSILES ARE LAUNCHED FROM THEIR DRONES. THE DRONES, NOW HAVE NO FURTHER USE, AND EITHER RETURN TO BASE, OR FALL TO GROUND ON THE PARACHUTES. AS OF THIS MOMENT THE SOUND MISSILES ARE UNDER FULL ACCELERATION TOWARDS THE EXPECTED MEETING POINT WITH THE TARGET, REACHING THE TOP SPEED OF APPROXIMATELY MACH 3,5 IN A VERY SHORT TIME SPAN.

WHEN THE THREE SOUND MISSILES ARE WITHIN APPROXIMATELY 100 MILES OF THE POSITION OF THE EXPECTED IMPACT WITH THE TARGET, TWO OF THE THREE MISSILES CHANGE THEIR FLIGHT PATH TOWARDS THE TARGET IN SUCH A MANNER AS TO BE ABLE TO APPROACH IT INDIVIDUALLY FROM RIGHT AND LEFT. THE ATTACK POSITIONS OF THESE TWO SOUND MISSILES ARE NOW AT AN ANGLE FROM EITHER SIDE. AT THIS POINT THE TARGET'S POSITION AND IDEAL COORDINATES FOR ITS DESTRUCTION ARE CONSTANTLY BEING RECALCULATED BY EACH OF THE THREE SOUND MISSILES.

HOWEVER, AT THIS STAGE, THE MAJORITY OF THE DATA USED TO CALCULATE THE THREE IMPACT POINTS WITH THE TARGET ARE PROVIDED BY THE TWO SOUND MISSILES ANGULARLY POSITIONED TO THE FLIGHT PATH OF THE TARGET. THE SONIC RECOGNITION DATA IS CONSTANTLY BEING COMPARED AND RE-VALUED WITH THE IMAGING DATA AS SOON AS THE SOUND MISSILES ARE IN A POSITION TO GATHER IMAGING DATA OF A SUFFICIENTLY VALUABLE FORM.

THE MID, (SPEAR HEAD), POSITIONED SOUND MISSILE IS NOW THE CLOSEST TO THE FIRST IMPACT POINT WITH THE TARGET AND IT WILL BE GUIDED ONTO THE TARGET BY COMPARING ITS OWN DATA AND THE DATA INCOMING FROM THE OTHER TWO SOUND MISSILES THAT PREVIOUSLY TOOK UP THEIR OWN STRIKE POSITIONS, AT ANGLES, FROM EACH SIDE. THE INCOMING DATA IS, FROM THE MOMENT THE TWO SOUND MISSILES HAVE DEPLOYED TO THE SIDES, A FORM OF AN IMAGINARY DATA TRIPOD, THIS GIVES THE THREE VECTORS REQUIRED FOR ABSOLUTE PRECISION. THEY PROVIDE CONSTANT SONIC AND IMAGING DATA IN REGARD TO THE CHANGING POSITION OF THE TARGET AND AN IDEAL STRIKE POSITION FOR EACH OF THE SOUND MISSILES.

IN CASE THE SOUND MISSILE, ON COURSE FOR A HEAD-ON COLLISION WITH THE TARGET MISSES, THE TWO REMAINING SOUND MISSILES WILL BEGIN TO ACT AS A PAIR. THE CLOSEST SOUND MISSILE WILL TAKE OVER THE ATTACK SEQUENCE FROM THE RESPECTIVE SIDE AT AN ANGLE. THE REMAINING, THIRD SOUND MISSILE, POSITIONS ITSELF FOR ITS OWN NEWLY CALCULATED IMPACT COORDINATES, AND AN EVENTUAL STRIKE OF IT'S OWN, AS THE LAST DEFENCE MEASURE.

STANDARD DEFENCE MODE:

IN THE STANDARD DEFENCE MODE, WHEN THE DRONES HOLD THEIR POSITIONS IN THE DEFENCE PERIMETER CIRCUMFERENCE, EACH OF THE DRONES/SOUND MISSILES IS FLYING AT THE SAME SPEED CONTROLLED BY THE INDIVIDUAL UNITS, AND FROM WITHIN THE COMMAND CENTRE. THE DRONES/SOUND MISSILES MAINTAIN AN EXACT DISTANCE FROM THE OTHER DRONE/SOUND MISSILE IN FRONT AND FROM THE ONE THAT FOLLOWS IT'S PATH, AT ALL TIMES. THE DRONES/SOUND MISSILES ARE PROGRAMMED TO FLY AT A CHOSEN FLIGHT LEVEL ABOVE SEA, PREFERABLY IN THE REGION OF 12.000 m.

AS THE FUEL IS USED UP BY EACH, INDIVIDUAL DRONE/SOUND MISSILE IN TURN, AT A PREDETERMINED FUEL LEVEL, ONE DRONE/SOUND MISSILE AFTER ANOTHER IS REPLACED TO ALLOW IT TO BE GUIDED BACK TO BASE FOR REFUELLING AND RE-LAUNCHING. THEREBY, A CONSTANT 24 HOUR, (ALL YEAR ROUND), SURVEILLANCE SYSTEM IS LAUNCHED THAT CIRCLES AROUND THE PROTECTED TERRITORY AND GUARDS AGAINST ANY POTENTIAL THREAT EITHER FROM AIR, SEA, OR LAND, AT ALL TIMES.

THE BASIC PRINCIPLE ON WHICH THE SOUND MISSILE DEFENCE SYSTEM FUNCTIONS IS ONE OF DIFFERING SOUND WAVES EMITTED BY ANY KIND OF WEAPONRY. EACH SOUND MISSILE IS EQUIPPED WITH A COMPLEX MULTI PURPOSE TECHNOLOGICAL BRAIN OF ITS OWN. THIS EQUIPMENT IS POSITIONED IN THE HEAD SECTION OF EACH DRONE/SOUND MISSILE IN A SPECIALLY DESIGNED GLASS ENCASED HEAD PART. THIS SECTION INCORPORATES A HIGH TECH SONIC ANALYSIS EQUIPMENT, THE MOST EFFECTIVE AND SENSITIVE TYPE OF SONIC VIBRATIONS AMPLIFYING TECHNOLOGY, VIBRATION ANALYSIS EQUIPMENT, DIGITAL IMAGING SECTION, AND IMAGING ANALYSIS EQUIPMENT.

THE INTERNALLY LOCATED HIGH SPECIFICATIONS SONIC ANALYSIS AND RECOGNISANCE TECHNOLOGY, (THAT IN REALITY RESEMBLES A CONSIDERABLY POWERFUL MICROPHONE), CONSTANTLY "LISTENS" TO INCOMING SOUNDS FROM ALL DIRECTIONS TOWARDS THE DRONES FRONT AND OUTER SIDE OF THE FUSELAGE, THUS THE DEFENDED CIRCUMFERENCE. THE SONIC DATA AND RESULTING VIBRATIONS ARE RECEIVED THROUGH THREE MAIN SECTIONS IN THE FUSELAGE THAT ARE FUNCTIONING INDEPENDENTLY OF EACH OTHER. HOWEVER, THE ANALYSED DATA IS TRANSFERRED INTO THE PRIMARY FRONT POSITIONED CENTRAL PROCESSOR UNIT THAT RE-EVALUATES THE DATA AND TAKES A DECISION ON WHAT ACTION IF ANY IS TO BE TAKEN. USING THE IMAGE RECOGNITION DATA FROM THE OPTICAL SECTION, AS A FINAL DOUBLE CHECK OVER THE SOUND SYSTEM EVALUATION OF AN INCIDENT, THAT SIGNALS A POTENTIAL THREAT.

THE FRONT OF THE INTERNALLY POSITIONED SOUND MISSILE FORMS THE FRONT FUSELAGE SECTION OF THE DRONE, WHILE THE "WARHEAD LIKE" FRONT PART IS MANUFACTURED FROM VERY THIN,

BUT INTENSELY STRONG HIGH QUALITY GLASS. THE TWO GLASS PARTS POSITIONED AT THE OUTER SIDE OF THE DRONE, AND THE FRONT GLASS SECTION, ARE ACTUALLY CONSTANTLY VIBRATING, (IN ALL DIRECTIONS), FROM THE DRONES FUSELAGE, WHILE REACTING TO ALL EXTERNAL INCOMING SOUNDS.

THE INCOMING SOUNDS AFFECT THE GLASS PARTS WITH VIBRATIONS, THAT ARE CONSTANTLY MEASURED BY PRECISION EQUIPMENT AND DIGITISED INTO RESULTING SONIC PATTERNS. THESE ARE IMMEDIATELY BEING COMPARED WITH THE DRONES/SOUND MISSILES DATABASE OF SOUNDS THAT ARE STORED IN THE MAIN PROCESSOR SYSTEM, LOCATED IN THE FRONT SECTION OF THE MISSILE'S FUSELAGE.

EACH OF THE THREE "LISTENING" SECTIONS THAT FORM A PART OF THE MISSILE'S FUSELAGE IS COVERED BY CONSTANTLY VIBRATING GLASS PLATES. THE MISSILE'S RECOGNITION SYSTEM FILTERS OUT ANY AIR FRICTION NOISES THAT ARE CREATED BY ITSELF AND BY THE DRONE'S OR THE MISSILE'S ENGINE. THE RANGE OF SONIC VIBRATIONS CAUSED BY SOUNDS THAT ARE KNOWN TO BE SAFE ARE IGNORED BY THE SYSTEM. THE SAME APPLIES FOR ANY INCOMING SOUNDS THAT ARE EMITTED BY THE "SISTER" DRONE/SOUND MISSILES IN THE DEFENCE CIRCLE. WHAT IS LEFT ARE ONLY THOSE INCOMING SOUNDS THAT REPRESENT ANYTHING ELSE.

THE SPACE COVERED BY THE FRONT SECTION'S "LISTENING AND VISUAL" TECHNOLOGY, COULD BE BEST DESCRIBED AS A DIRECTLY OUTWARD POINTING IMAGINARY CONICAL SHAPE. THE TWO GLASS COVERED SECTIONS POSITIONED AT THE OUTER SIDE, ABOVE EACH OTHER IN THE FRONT PART OF THE MISSILE'S FUSELAGE FORM A MORE LIKE RECTANGULAR SHAPE THAT POINTS STRAIGHT & UP, AND STRAIGHT & DOWN RESPECTIVELY AT PRE CALCULATED ANGLES. THUS, FORMING THE IMAGINARY "LISTENING", CIRCULAR DEFENCE LINE. THESE SIDE "LISTENING" SECTIONS RECEIVE INCOMING SOUNDS FROM BENEATH TO THE HORIZONTAL LINE. WHILE THE TOP POSITIONED SECTION IS "LISTENING" TO ALL INCOMING SOUNDS FROM THE STRATOSPHERE DOWN TO THE HORIZONTAL LEVEL LINE.

THESE SONIC VIBRATIONS ARE IMMEDIATELY DIGITALISED AND THE "BRAIN" OF THE DRONE/SOUND MISSILE RUNS THE DATA THROUGH THE COMPARISON SYSTEM AND ANALYSES, WHETHER IT IS A SOUND PATTERN THAT CAN BE RECOGNISED AS HOSTILE, OR NOT. THE SOUND MISSILE HAS ONLY TWO MAIN REGIMES UNDER WHICH IT FUNCTIONS. A DEFENCE SURVEILLANCE REGIME AND AN ATTACK TO DEFEND REGIME.

ALL SONIC AND IMAGING DATA IS CONSTANTLY BEING FED INTO THE MAIN PROCESSOR UNIT, WHICH FILTERS FOR CIVIL, "SOS", AND OTHER INFORMATION IN ADDITION TO DEFENCE. EACH SINGLE SONIC VIBRATION PATTERN THAT HAS BEEN ANALYSED BY THE PROCESSOR OF THE MISSILE IS ALSO SECTIONED INTO FRIENDLY, HOSTILE, OR

POTENTIALLY HOSTILE PATTERN. THE TWO PRIMARY QUESTIONS THE SYSTEM POSES ITSELF FOR THE ANALYSIS ARE: IS THE ANALYSED SONIC PATTERN A WEAPON, CIVIL, OR OTHER SOUND? IF A WEAPON, IS IT FRIENDLY, HOSTILE, OR ONE THAT REQUIRES FURTHER ANALYSIS, AND/OR ADDITIONAL ORDERS FROM THE COMMAND CENTRE.

EACH SOUND MISSILE IS PROGRAMMED PRIOR TO ITS LAUNCH WITH ALL KNOWN SONIC PATTERNS AND IMAGES INCLUDING THOSE THAT ARE EMITTED BY ANY KIND OF WEAPONRY THAT IS CONSIDERED TO BE FRIENDLY, OR HOSTILE, AS WELL AS SUCH SONIC PATTERNS THAT BELONG TO THE CIVIL AVIATION SECTOR, ETC. WHENEVER A SOUND MISSILE RECEIVES A SOUND THAT MATCHES, A SONIC PATTERN THAT HAS BEEN PRE PROGRAMMED INTO ITS BRAIN AS FRIENDLY, IT MAKES A COMPARISON RESULTING IN A MATCH OF THIS SONIC PATTERN AND TAKES NO ACTION. OTHER THAN TO MAKE AN INSTANT REPORT TO THE COMMAND CENTRE ABOUT THE RECOGNISED FRIENDLY SOUND AND ITS COORDINATES CALCULATED BY THE THREE SOUND MISSILES IN THEIR INDIVIDUAL POSITIONS WITHIN THE DEFENCE PERIMETER.

WHEN ANY OF THE SOUND MISSILES RECEIVE A SOUND PATTERN THAT IS INTERPRETED BY THEIR RECOGNISANCE SYSTEM, AS A HOSTILE, OR POTENTIALLY HOSTILE SONIC PATTERN, THE RESPECTIVE SOUND MISSILES SWITCH AUTOMATICALLY INTO THE ATTACK MODE, AND SEND THREE OUT GOING SIGNALS. ONE REPORTS THE INCIDENT TO THE COMMAND CENTRE. ANOTHER COMMUNICATES WITH THE DRONE/SOUND MISSILE PRECEDING IT TO COUNTER CHECK WHETHER THE SONIC PATTERN HAS ALSO BEEN ANALYSED AS THE SAME PATTERN BELONGING TO THE SAME TYPE OF WARFARE MACHINERY. THE THIRD SIGNAL IS COMMUNICATES WITH THE NEXT, SUCCESSIVE SOUND MISSILE FOR THE SAME REASON.

ONE CAN SAY THAT THESE THREE DRONES/SOUND MISSILES ACTUALLY START, AS OF THIS MOMENT, TO PLAN & ACT TOGETHER. ALTHOUGH THEIR ACTIONS ARE STILL CONSIDERED INDEPENDENT TO THE EXTENT THAT WHEN ONE SOUND MISSILE DOES NOT DESTROY THE SELECTED TARGET FOR ANY REASON, THE NEXT SOUND MISSILE IN SUCCESSION TAKES THAT TASK OVER. THE SOUND MISSILE THAT RECOGNISED AND PINPOINTED THE HOSTILE SONIC PATTERN, (OR THE ONE THAT IS THE CLOSEST TO IT AT THE MOMENT WHEN ATTACK SEQUENCE HAS BEEN DECIDED UPON), IS THE ONE THAT WILL LEAD THE ATTACK SEQUENCE OF THE THREE DEPLOYED SOUND MISSILES.

IF THE SELECTED TARGET HAS BEEN ELIMINATED, THERE ARE STILL TWO SOUND MISSILES FROM THE ACTION THAT REMAIN. THESE TWO SOUND MISSILES AUTOMATICALLY RETARGET THEMSELVES TO ANY NEW POTENTIAL THREATS, SUCH AS OTHER BALLISTIC MISSILES. IF NO NEW TARGET IS DETECTED THE COMMAND CENTRE, OR THE SOUND MISSILE ITSELF, MAY DECIDE TO INITIATE THE SELF DESTRUCTION PROCESS. THE OVER ALL FINAL DECISION STILL REMAINS WITH THE COMMAND CENTRE. IT IS ABLE TO ORDER AN ABORT SIGNAL, RETURN TO BASE, OR ANY OTHER INSTRUCTIONS.

IF NO ABORT SIGNAL IS RECEIVED BY ANY ONE OF THESE THREE SOUND MISSILES, THEN THESE DEPLOY TOGETHER TOWARDS THE LAST LOCATION FROM WHICH THE LATEST REGISTERED HOSTILE SONIC PATTERN ORIGINATED. THE SOUND MISSILES ATTACK JOINTLY, IN SEQUENCE. HOWEVER, ONE FOLLOWS ANOTHER, FROM DIFFERENT DIRECTIONS UNDER VARIOUS ANGLES TO THE TARGET OBJECTIVE, WHICH IS TO BE DESTROYED.

SUPPOSING THE SOUND OF AN ENEMY BALLISTIC MISSILE HAS BEEN REGISTERED BY ANY OF THE DRONES/SOUND MISSILES, THREE SOUND MISSILES ACT JOINTLY AND POSITION THEMSELVES IN SUCH A THREE DIMENSIONAL PATTERN THAT RESULTS IN SUCCESSIVE INTERCEPTION OF THE CALCULATED PATH OF THE ENEMY MISSILE ROUGHLY AT SAME DISTANCES ONE AFTER ANOTHER, EXCEPT THE MID POSITIONED SOUND MISSILE. THIS FORM OF ATTACK RULES OUT ENTIRELY THE POSSIBILITY THAT THE SELECTED TARGET COULD BE MISSED.

BACKGROUND:

WHEN ONE REVIEWS THE STRATEGY AND COSTS OF MODERN WARFARE MACHINERY CERTAIN CRITICAL ASPECTS EMERGE THAT COLOUR THE VIEWS ON THE SUBJECT OF DEFENCE. AMONG THESE ARE SOME COMMON POINTS APPLICABLE TO ANY COUNTRY AND ANY INDIVIDUAL.

1. NO ONE WISHES THEIR COUNTRY TO EVER COME UNDER A SURPRISE ATTACK, NOR AN ATTACK THAT CAN BE PREDICTED, BUT WOULD HAVE DEVASTATING CONSEQUENCES.
2. BILLIONS OF POUNDS THAT COULD BE USED TO THE BENEFIT OF THE POPULATION IN GENERAL, AS WELL AS FOR THE BENEFIT OF THE EACH RESPECTIVE COUNTRY, ARE TAKEN UP BY "DEFENCE" BUDGETS ANNUALLY.
3. THE MAJORITY OF DEFENCE SYSTEMS ARE DESIGNED FROM SCRATCH SO THAT THEY ALSO HAVE THE CAPABILITY TO BE USED AS AN OFFENSIVE WEAPONS SYSTEM WITH AS FEW CHANGES AS POSSIBLE. THEREFORE, DEFENCE PROJECTS THAT GIVE ONE NATION "AN IMAGINARY PEACE OF MIND" ARE PRE-DESTINED TO CAUSE UNEASE TO OTHER NATIONS.
4. MANY GLOBAL CONGLOMERATES MAKE BILLIONS OF POUNDS OUT OF THE DEVELOPMENT OF SUCH SYSTEMS – YET NOT ONE OF THESE "SO CALLED" DEFENCE SYSTEMS IS FOOLPROOF. (DESPITE WHAT THE PRESENTATION TO THE PUBLIC SAYS)

TO DEFEND A COUNTRY EFFECTIVELY, A DEFENCE SYSTEM NEED ONLY HAVE THE CAPABILITY OF SHORT TO MID RANGE RESPONSE IN DEFENCE, (IE TO DESTROY ANY POTENTIALLY AGGRESSIVE HOSTILE WEAPON THAT IS ON COURSE TOWARDS THE DEFENCE PERIMETER, OR APPARENTLY INTENDS TO CROSS IT). A DEFENCE SYSTEM WAS SOUGHT THAT WOULD RENDER USELESS ANY KNOWN MODERN WARFARE TECHNOLOGY.

IF EFFECTIVE, IT HAD TO BE ABLE TO RECOGNISE AND DESTROY INCOMING MISSILES, HOSTILE AIRCRAFT, (EVEN THOSE COMMONLY KNOWN AS STEALTH TECHNOLOGY). YET, THE DEFENCE SYSTEM STILL HAD TO PROVIDE DATA AND INFORMATION ABOUT ANY POTENTIAL CONVENTIONAL SURFACE THREATS. TO FIND SYSTEM THAT COVERS SUCCESSFULLY ALL OF THESE ASPECTS A COMMON DENOMINATOR WAS SOUGHT AND FOUND.

DEFENCE SYSTEMS USED IN THE PAST, NOW, AND EVEN THOSE PLANNED TO BE USED IN THE NEAR FUTURE EVIDENTLY IGNORE ONE BASIC PHYSICAL FACT. THERE ARE MISSILES THAT ARE HEAT SEEKING, OPTICALLY SEEKING, LASER GUIDED MISSILES, RADAR GUIDED MISSILES, ELECTRONICS EMISSIONS SEEKING MISSILES, AIRCRAFT LAUNCHED MISSILES, MISSILES DESIGNED FOR LAUNCH FROM NUCLEAR SUBMARINES, AND COMBINATIONS OF ALL ABOVE, IN A NUMBER OF VARIATIONS. CURRENTLY, THERE ARE NO MISSILES THAT ARE BASED ON SOUND RECOGNITION, THUS SOUND-SEEKING.

HOWEVER, SUCH A SYSTEM IS PRACTICALLY THE ONLY ONE THAT CANNOT BE FOOLED BY ANY COUNTER MEASURE. ESPECIALLY NOT WHEN COMBINED WITH AN OPTICAL (IMAGING) SECTION AS A "FINAL CHECK" FORM OF VISUAL CONTROL. NO WEAPON DESIGNED FOR ANY PURPOSE, BE IT AN INTERCONTINENTAL BALLISTIC MISSILE, TANK, ARMOURED VEHICLE, ANY KIND OF NAVAL VESSELS, ANY KIND OF AN AEROPLANE, OR HELICOPTER CAN CURRENTLY UNDERTAKE AN ATTACK, ON ANY DESIRED TARGET, WITHOUT EMITTING A SOUND.

IT IS ABSOLUTELY UNIMPORTANT WHETHER THE EMITTED SOUND IS STRONG OR WEAK. ANY SOUND EMITTED BY THE ABOVE NAMED WEAPONS INCORPORATES RECOGNISABLE SONIC PATTERNS OF A FINGERPRINT QUALITY. WITH APPROPRIATE TECHNOLOGY, THESE SONIC PATTERNS CAN BE FILTERED FROM ANY DISTURBANCES OR SURROUNDING NOISES, ETC. THE RESULTING SONIC PATTERNS CAN BE ANALYSED AND PRECISELY IDENTIFIED AS A HOSTILE SONIC PATTERN, THAT IS EMITTED BY A KNOWN KIND OF WEAPON, AT CONSIDERABLE DISTANCES.

OTHER DEFENCE SYSTEMS:

TODAY A DEFENCE SYSTEM IS BEING HAILED AS THE BRIGHT FUTURE FOR ALL. THE ONE REFERRED TO IS THE "SON OF STAR WARS" SYSTEM.

THE ONLY TRUE CAPABILITY OF THIS SYSTEM IS TO CREATE A SITUATION THAT SOME COUNTRIES MAY CHOOSE TO INTERPRET TO BE A THREAT AND A "TARGET TO BEAT AT ANY COST". THE DANGER IS NOT A NEW ARMS RACE. IN REALITY, THERE IS A HIGH RISK THAT A COUNTRY WILL TAKE UP THIS CHALLENGE AND WILL UTILISE ITS BEST SCIENTISTS AND RESOURCES TO PROVIDE AN IMMEDIATE SOLUTION THAT WILL RENDER THIS SYSTEM USELESS. THERE ARE INDIVIDUALS WHO WOULD FIND THIS CHALLENGE QUITE AN EASY TASK. THEN WHAT NEXT?

IT IS FELT ABSOLUTELY ESSENTIAL TO POINT OUT THAT THE ABOVE MENTIONED SYSTEM IS IN FACT NOT A DEFENCE SYSTEM AT ALL. ACTUALLY, AS A DEFENCE SYSTEM, IT IS PRACTICALLY USELESS. THERE ARE INDIVIDUALS WHO, IF GIVEN THE TASK, CAN MAKE THE "SON OF STAR WARS" MISSILE DEFENCE SYSTEM MISS ITS SELECTED TARGET EVERY TIME, WITHOUT ANY SUBSTANTIAL PROBLEMS. IT IS SIMPLY A QUESTION OF THE DESIGN OF ADDITIONAL FEATURES FOR THE "SELF-DEFENCE" AGAINST THE "SON OF STAR WARS" MISSILE, WITH LEAST INVESTMENT AND MAXIMUM EFFECT.

IT IS FELT ABSOLUTELY CRUCIAL TO EMPHASISE, THAT TECHNICAL AMENDMENTS REQUIRED TO MAKE AN EXISTING INTERCONTINENTAL BALLISTIC MISSILE, THAT COULD BE USED IN AN ATTACK, PROVIDE ITS OWN SELF-DEFENCE AGAINST AN IMPACT WITH A "SON OF STAR WARS" MISSILE, IS A SIMPLE PROCESS THAT WOULD COST, AT MAXIMUM, £5,000. NO NEED TO DEVELOP NEW WEAPONS!

THERE IS NO WEAPON, NOR ANY SO CALLED DEFENCE SYSTEM THAT IS INVINCIBLE. A COUNTER SOLUTION IS ALWAYS ONLY A QUESTION OF TIME AND THE RIGHT CIRCUMSTANCES. ONE CAN SUFFICIENTLY DEFEND ONE'S COUNTRY AGAINST ANY WEAPONS THAT ARE USED AT PRESENT WITHOUT COMPLICATIONS, BUT THE RISKS OF SOME OTHER COUNTRY BEING ABLE TO DEVELOP A SYSTEM THAT PROVIDES THE CORRECT ANSWER TO THE PROBLEM WILL ALWAYS REMAIN; WHATEVER SYSTEMS MAY BE USED.

ALTHOUGH SOME COUNTRIES PRESENT THEIR FORM OF DEFENCE AS THE PERFECT SOLUTION, COSTING BILLIONS OF DOLLARS, THERE ARE ALWAYS SIMPLISTIC SOLUTIONS AT HAND TO CONTRADICT ANY SUCH SYSTEMS, OR TO CARRY OUT AN ATTACK ON THE TERRITORY THAT IS SUPPOSEDLY PROPERLY GUARDED. IF ONLY, FOR THE SIMPLEST OF REASONS, TO PROVE TO ALL OTHERS, THAT THE DEFENCE OF THE COUNTRY IN QUESTION IS ABSOLUTELY USELESS.

AS ONE COUNTRY HAS THRUST ITSELF INTO THE SPOTLIGHT, IT IS A GOOD MEASURE TO LOOK AT ITS OTHER CAPABILITY THAT IT BELIEVES IS ENVIED THROUGHOUT THE WORLD.

COUNTERING STEALTH TECHNOLOGY:

THIS IN MOST CASES MULTI-MILLIONS OR EVEN BILLIONS OF POUNDS OF TECHNOLOGY APPLIED TO AIRCRAFT, SUBMARINES, AND MANY OTHER FORMS OF WARFARE. IT IS BEING DEFINED TO THE GENERAL WORLD PUBLIC AS A PURELY DEFENSIVE MEASURE. HOWEVER, THERE ARE COUNTRIES THAT APPARENTLY CONSIDER SUCH WEAPONS TO BE QUITE THE OPPOSITE.

ONE MAY TAKE FOR THE PURPOSE OF GIVING A SIMPLE (ONE OFF) EXAMPLE WITH NO PREJUDICE TO ANYONE, AN "F 117 A" BOMBER AIRCRAFT. THIS AIRCRAFT IS BUILT INCORPORATING THE TOP OF THE RANGE "STEALTH" TECHNOLOGY. HOWEVER, OTHER WEAPONS OF A

SIMILAR KIND HAVE ALREADY BEEN IN USE FOR SOME TIME. ALONGSIDE THIS, NEW DEVELOPMENTS OF THE SAME NATURE ARE CONSTANTLY BEING BROUGHT TO TEST STAGE. ITS CONSTRUCTION HIDES IT FROM MOST KINDS OF RADAR, ITS EXHAUSTS ARE COOLED TO CONCEAL IT FROM HEAT SEEKING MISSILES. IT IS MAINLY A NIGHT OPERATION PLANE, SO TO TARGET IT AND SHOOT IT DOWN WITH STANDARD WEAPONRY IS THOUGHT, BY ITS DESIGNERS, TO BE AN IMPOSSIBLE TASK. YET; ITS THRUST ENGINES SHALL ALWAYS EMIT A CONSTANT SOUND THAT CAN BE EASILY RECOGNISED. THEREBY, ITS POSITIONAL COORDINATES CAN BE PRECISELY LOCATED, WHETHER A RADAR SHOWS IT TO BE THERE, OR NOT. CAN ONE DESTROY THIS PLANE, OR ANY SIMILAR, WITH THE SOUND MISSILE TECHNOLOGY? THE ANSWER IS A SIMPLE YES. ANYTIME, AND EVERY TIME!

ANYONE SHOULD ALWAYS BEAR IN MIND THAT IT IS NOT THE AMOUNT OF MONEY SPENT ON DEVELOPING A WEAPON, OR ANY COUNTER DEFENCE PROJECT, BUT PRIMARILY ONLY A QUESTION OF PROVIDING A GOOD ENOUGH IMPETUS TO THOSE WHO HAVE THE ABILITY TO PROVIDE SOLUTIONS TO ANY GIVEN PROBLEM. THERE IS ALWAYS A NUMBER OF SUCH PEOPLE AVAILABLE IN ANY COUNTRY AND UNDER THE CORRECT CIRCUMSTANCES THESE PEOPLE WILL ALWAYS PRODUCE, IN THE REQUIRED TIME SCHEDULE, A COUNTER SYSTEM THAT WILL DESTROY, BY-PASS, OR MAKE OBSOLETE ANY SUCH SYSTEM, THAT IS THE TARGET TO BE MET.

WITH THE PROPOSED SOUND MISSILE DEFENCE SYSTEM, THE THREAT POINTS TOWARDS NOTHING BUT AN AGGRESSOR'S WEAPON. ANY ATTACK CAN BE RENDERED UNSUCCESSFUL, EVEN POINTLESS. AS WITH ALL COSTS, IF THE OUTCOME OF SUCH AN ATTACK HAS A HIGH MONETARY LOSS AS A POTENTIAL THEN THE ATTACK MAY BE RECONSIDERED RATHER QUICKLY.

ESSENTIAL MAIN TECHNICAL FEATURES:

THE INVENTION COMPRISES OF THE FOLLOWING FEATURES:

COMMAND CENTRE
DEFENCE PERIMETER
DRONE
SOUND MISSILE
MISSILE LAUNCH TUBE
MISSILE LOCKING MECHANISM
MISSILE FLAP RETRACTION GROOVES
MISSILE FRONT DIRECTIONAL FLAPS
MISSILE REAR DIRECTIONAL FLAPS
MISSILE THRUST PROPULSION UNIT
MISSILE THRUST ENGINE EXHAUST
MISSILE SOLID FUEL TANK
MISSILE LIQUID FUEL TANK
MISSILE GLASS HEAD
MISSILE GLASS HEAD SUSPENSION UNIT

MISSILE GLASS HEAD SEAL
CENTRAL PROCESSOR UNIT
SONIC VIBRATIONS ANALYSIS UNIT
SONIC DATABASE UNIT
DIGITAL IMAGING UNIT
DIGITAL IMAGING DATABASE UNIT
DIGITAL IMAGING ANALYSIS UNIT
OPTICAL UNIT
SATELLITE COMMUNICATIONS RECEPTION UNIT
GYROSCOPE UNIT
GLOBAL POSITIONING UNIT
CENTRAL COMMAND RECEIVER UNIT
CENTRAL COMMUNICATIONS UNIT
INTER-DRONE COMMUNICATIONS UNIT
FLIGHT LEVEL ANALYSIS UNIT
FORCE ANALYSIS UNIT
DIRECTIONAL ANALYSIS UNIT
ANGLE-TO-TARGET ANALYSIS UNIT
DISTANCE-TO-TARGET ANALYSIS UNIT
TARGET SPEED ANALYSIS UNIT
TARGET COORDINATION ANALYSIS UNIT
SELF DESTRUCT UNIT
SELF DESTRUCT CHARGE
TOP SIDE GLASS COVER
TOP SIDE COVER SUSPENSION UNIT
TOP SIDE COVER SEAL
LOWER SIDE GLASS COVER
LOWER SIDE COVER SUSPENSION UNIT
LOWER SIDE COVER SEAL
RIGHT WING FLAP
LEFT WING FLAP
REAR RIGHT SIDE FLAP
REAR LEFT SIDE FLAP
STABILISER
RUDDER
PARACHUTE
PARACHUTE COMPARTMENT
PARACHUTE EXPLOSIVE THRUST CHARGE
DRONE THRUST TURBINE ENGINE
DRONE THRUST ENGINE EXHAUST
DRONE FUEL TANK

THE ENABLING FEATURE OF THE INVENTION IS THE SOUND ANALYSIS AND RECOGNISANCE SYSTEM LOCATED WITHIN THE GLASS COVERED MISSILE HEAD, THAT APPEARS TO BE TO THE UNTRAINED EYE, THE HEAD OF THE DRONE THAT CARRIES THE SOUND MISSILE INTERNALLY.

MAIN COMPONENT DETAILS:

THE **COMMAND CENTRE** IS THE PRIMARY CONTROL SYSTEM, REGULATING THE DRONES/SOUND MISSILES AND PROVIDING CONSTANT TWO WAY FLOW OF DATA. ALL DATA IS RECORDED IN THE MAIN COMPUTER SYSTEM LOCATED IN THE CENTRE. HERE ALL DATA IS RE-EVALUATED TO PROVIDE CRITICAL PATH ANALYSIS AS WELL AS CIVILIAN AND RESCUE SUPPORT. THIS IS THE ONLY LOCATION THAT CAN GIVE AN ABORT, OR SELF DESTRUCT ORDER. THEREFORE, THIS IS WHERE THE MAIN SYSTEMS OVERRIDE FOR ALL DRONES/SOUND MISSILES IS SITUATED. ITS OTHER FUNCTION IS TO PROVIDE A REFUELLING, TAKE-OFF, LANDING, AND SERVICING BASE FOR THE DRONES/SOUND MISSILES. IT MUST BE MANNED 24 HOURS A DAY, EVERYDAY. HOWEVER, THE NUMBER OF PERSONNEL REQUIRED IS COMPARATIVELY SMALL.

THE **DEFENCE PERIMETER;** THIS IS CREATED BY PLOTTING AN EXACT CIRCLE TO CIRCUMNAVIGATE THE HOME TERRITORY. THE PERIMETER IS FOLLOWED PRECISELY BY THE DRONES/SOUND MISSILES THROUGH THE MEANS OF "GPS", AND ORDERS IN RESPECT OF CHANGE OF POSITION, (CHANGING THE DISTANCE ROUND THE CIRCUMFERENCE), RECEIVED FROM THE COMMAND CENTRE.

THE **DRONE** IS DESIGNED TO BE AN ACTIVE ENCASING FOR THE SOUND MISSILE. IT FULFILS THE PURPOSE OF A FLYING LAUNCH PLATFORM, WHILE PROVIDING THE COMPLETE UNIT WITH A MAXIMUM FUEL EFFICIENCY, WHICH GIVES MAXIMUM FLIGHT RANGE DURING STANDARD OPERATIONS. THE MAIN LAUNCH PLATFORM TASK IS ENHANCED BY PROVIDING THE SOUND MISSILE WITH A START SPEED OF ROUGHLY 400 MPH AND THEREFORE IT HAS NO NEED FOR EXCESSIVE AMOUNTS OF FUEL CONSUMPTION TO COUNTER THE FORCE OF GRAVITY, AS WOULD APPLY DURING LIFT-OFF FROM A GROUND BASED POSITION.

THE DRONE'S INTERIOR STRUCTURE CONSISTS MAINLY OF LARGE FUEL TANKS FOR ITS OWN THRUST ENGINE, WHILE THE SOUND MISSILE IS LOCATED, ABOVE THE DRONES ENGINE, ALIGNED TO THE CENTRAL AXIS. ALL THE RECOGNISANCE TECHNOLOGY UNITS AND PARTS ARE SEEMINGLY LOCATED WITHIN THE DRONE, BUT IN FACT THEY ARE AN ACTIVE PART OF THE MISSILE INSERTED INTO THE FUSELAGE OF THE DRONE.

THE **SOUND MISSILE** IS A COMPLETELY NEW CONCEPT OF MISSILE TECHNOLOGY, USING AN ENHANCEMENT OF THE BASIC PRINCIPLES OF PHYSICS WITH REGARD TO SONIC EMISSIONS. APART FROM THE SONIC RECOGNITION SECTION OF THE SOUND MISSILE, IT IS ALSO EQUIPPED WITH A VISUAL ANALYSIS SECTION PROVIDING THE HIGHEST LEVEL OF QUALITY IN RESPECT OF IMAGING DATA RECEIVED. THE SOUND MISSILE IS FITTED WITH A GLASS HEAD SECTION THAT PROVIDES THE SPACE FOR, AND COVERS ALL THE ABOVE TECHNOLOGY. IT ALSO PROVIDES A CLEAR VIEW.

IT IS ESSENTIAL TO NOTE THAT THIS SOUND MISSILE IS TOTALLY EFFECTIVE IN DEFENSIVE DESTRUCTION OF ANY AIR-BORN TARGETS WITHOUT THE NEED FOR ANY CURRENTLY AVAILABLE WARHEADS. THE EXACT DETAILS WILL BE THE SUBJECT OF ANOTHER PATENT TO BE FILED AT A LATER STAGE.

THE GLASS HEAD IS MOUNTED WITHIN SUSPENSION UNITS THAT ALLOW THE HEAD TO ABSORB ALL SONIC VIBRATIONS TO BE ANALYSED. THE GLASS HEAD IS PENETRATED BY 16 AIR INTAKES THAT GUIDE INCOMING AIR INTO SPECIALLY DESIGNED AIR LEADING TUNNELS POSITIONED BETWEEN THE INNER AND OUTER CASING OF THE SOUND MISSILE. THIS TECHNOLOGY WILL BE FURTHER DESCRIBED IN A SEPARATE PATENT FILING OF THE SOUND MISSILE AT A LATER STAGE.

THE SOUND MISSILE IS DESIGNED IN SUCH A MANNER, SO THAT IT CAN BE FITTED WITH A STANDARD SOLID FUEL THRUST PROPULSION UNIT. HOWEVER, A COMPLETELY NEW CONCEPT MISSILE THRUST ENGINE WILL BE ALSO FILED AS A SEPARATE PATENT REQUEST AT A LATER STAGE, AS AN ALTERNATE MEANS OF MORE EFFECTIVE PROPULSION. FOR THE PURPOSE OF THE DEFENCE SYSTEM DESCRIPTION, A SOLID FUEL MISSILE THRUST ENGINE IS CONSIDERED TO BE SUFFICIENT.

THE OUTER FUSELAGE OF THE SOUND MISSILE IS OF A TUBULAR SHAPE AND IS TO BE MANUFACTURED FROM TITANIUM. THE INNER SECOND FUSELAGE CASING OF THE SOUND MISSILE FORMS A SOLID FUEL COMPARTMENT AND THE PRIMARY COMBUSTION CHAMBER OF THE SOUND MISSILES CONSTRUCTION DESIGN. THE TUBULAR FREE SPACE BETWEEN THE TWO CASINGS INCORPORATES A SECONDARY FUEL TANK FOR THE NEW MISSILE THRUST PROPULSION UNIT. THIS SECTION ALSO HOLDS THE AIR TUNNELS THAT LEAD OUTER AIR IN AROUND THE INNER CASING.

THE TUNNELS LEAD THE AIR AROUND THE SECONDARY FUEL TANKS IN LINE, WHILE EXITING AT THE END OF THE FUSELAGE INTO OPEN AIR. THE SOUND MISSILE IS FURTHER FITTED WITH TWO SERIES OF FOUR DIRECTIONAL FLAPS, THE FIRST SET OF FOUR DIRECTIONAL FLAPS ARE POSITIONED IN A CROSS SECTION, JUST BEHIND THE FRONT GLASS HEAD. THE SECOND SET OF FOUR DIRECTIONAL FLAPS ARE LOCATED AT THE END SECTION OF THE SOUND MISSILE OUTER CASING ALSO IN A CROSS-PATTERN WITH REGARD TO AN IMAGINARY HORIZONTAL CUT THROUGH THE MISSILE FUSELAGE.

ALL THE DIRECTIONAL FLAPS ARE ALSO MANUFACTURED FROM TITANIUM TO BE ABLE TO WITHSTAND THE EXCESSIVE AMOUNT OF DRAG & FRICTION. THEIR EXACT FUNCTIONS AND CHANGES IN CONSTRUCTION TO ACHIEVE BETTER RESULTS IN THE RAPID CHANGE OF A MISSILES DIRECTION WILL ALSO BE SUBJECT TO ANOTHER PATENT REQUEST THAT WILL BE FILED AT A LATER STAGE.

THE **MISSILE LAUNCH TUBE** IS ALIGNED TO THE CENTRAL AXIS OF THE DRONE'S FUSELAGE. IT FULFILS THE FOLLOWING PURPOSES. IT PROVIDES THE SOUND MISSILE WITH AN ACTUAL LAUNCH TUBE. AS IT ALSO FORMS A PART OF THE DRONES OUTER SKIN CONSTRUCTION, IT PROVIDES AN AIR DIVISION BETWEEN THE SOUND MISSILES SOLID FUEL TANK AND THE ACTUAL FLUID FUEL TANK OF THE DRONE'S THRUST PROPULSION UNIT.

THE LAUNCH TUBE IS FURTHER FITTED WITH FOUR IN LINE GROOVES THAT START AT THE FRONTS SECTION AND FOLLOW UP ALMOST TO THE END OF THE TUBE, WHERE THEY PROVIDE AN END POSITION FOR THE SOUND MISSILES FUSELAGE THROUGH FIXING THE DIRECTIONAL FLAPS. AS THE LAUNCH TUBE IS AN INTEGRATED PART OF THE DRONES FUSELAGE, IT IS MANUFACTURED OF THE SAME MATERIAL AS THE DRONES OUTER SKIN. THIS MATERIAL IS REINFORCED KEVLAR COMPOSITE. THE MATERIAL WAS CHOSEN FOR ITS LIGHTWEIGHT AND RIGID PROPERTIES. THIS IN TURN PROVIDES ADDITIONAL AMOUNTS OF FUEL CAPACITY THAT THE DRONE IS ABLE TO CARRY FOR ITS OWN PROPULSION UNIT.

THE **MISSILE LOCKING MECHANISM** IS LOCATED IN THE FRONT INNER SECTION OF THE LAUNCH TUBE. IT IS FORMED BY TWO OPPOSITE POSITIONED LEVER LOCKS THAT TURN IN THEIR PIN BEARINGS. THE LOCKING MECHANISM IS OPERATED BY THE INTERNALLY POSITIONED CENTRAL PROCESSOR AND SET TO OPEN WHEN A DEFENSIVE ACTION HAS BEEN APPROVED. HOWEVER, THE LOCKING MECHANISM DOES NOT OPEN BEFORE THE DRONE HAS REACHED A POSITION IN AN IMAGINARY LINE WITH THE EXPECTED TARGET'S DIRECTION, THEN THE SOUND MISSILE IS ACTUALLY PERMITTED TO EXIT ITS OWN DRONE.

THE **MISSILE FLAP RETRACTION GROOVES** ARE A CONSTRUCTION DESIGN THAT ENABLES THE SOUND MISSILE TO BE MANUALLY INSERTED INTO THE DRONE'S FUSELAGE AND LOCKED IN ITS PRE START POSITION. THE SOUND MISSILE'S FLAPS ARE MANUALLY RETRACTED FOR SLOTTING INTO THE GROOVES AND THE MISSILE SLIPS INTO THE DRONE'S FUSELAGE – LAUNCH TUBE. THE GROOVES ARE POSITIONED ONE AGAINST ANOTHER IN A CROSS-LIKE DESIGN, MATCHING THE DESIGN POSITION OF THE SOUND MISSILE'S FLAPS. ON THE OPPOSITE SIDE OF THE LAUNCH TUBE, THE GROOVES FORM AN INTEGRATED PART OF THE LIQUID FUEL TANK'S INNER SKIN.

THE **MISSILE'S FRONT DIRECTIONAL FLAPS** ARE LOCATED IN A CROSS-LIKE MANNER AT THE SIDES OF THE FRONT SECTION OF THE SOUND MISSILE'S FUSELAGE. IN THE STANDARD POSITION, THE FRONT DIRECTIONAL FLAPS ARE RETRACTED INTO THEIR GROOVES. THESE FLAPS ARE TO BE MANUFACTURED FROM TITANIUM, WHILE THEIR MEANS OF TURNING, THEIR RESPECTIVE POSITIONING, AND THE EXACT DESIGN WILL BE SUBJECT; (AS PREVIOUSLY MENTIONED), TO A NEW PATENT REQUEST AT A LATER STAGE.

THE **MISSILE REAR DIRECTIONAL FLAPS** ARE LOCATED IN A CROSS LIKE RESPECTIVE POSITION AT THE SIDES OF THE REAR SECTION OF THE SOUND MISSILE'S FUSELAGE. IN THE STANDARD POSITION, THE REAR DIRECTIONAL FLAPS ARE RETRACTED INTO THEIR GROOVES, SAME AS THE FOUR FRONT POSITIONED ONES. THESE FLAPS ARE TO BE MANUFACTURED FROM TITANIUM, WHILE THEIR MEANS OF TURNING, THEIR RESPECTIVE POSITIONING, AND THE EXACT DESIGN WILL BE SUBJECT TO A NEW PATENT REQUEST AT A LATER STAGE.

THE **MISSILE THRUST PROPULSION UNIT** IS POSITIONED SLIGHTLY BENEATH THE DRONE'S THRUST ENGINE, ALIGNED TO THE CENTRAL AXIS OF THE DRONE'S FUSELAGE. IN A STANDARD SITUATION THE PROPULSION UNIT REMAINS INACTIVE, UNTIL SUCH EVENT, WHEN AN ORDER TO DESTROY A TARGET HAS BEEN GIVEN EITHER BY THE COMMAND CENTRE OR BY THE SOUND MISSILE'S OWN CENTRAL PROCESSOR UNIT.

A STANDARD TYPE OF MISSILE SOLID FUEL THRUST ENGINE MAY BE USED TO PROVIDE PROPULSION FOR THE SOUND MISSILE. FOR THE SOLE PURPOSE OF THE SOUND MISSILE DEFENCE SYSTEM'S DESCRIPTION, IT THEREBY DOES NOT NEED ANY TECHNICAL DESCRIPTIONS, OR PRECISE SPECIFICATIONS. HOWEVER, A COMPLETELY RE-DESIGNED MISSILE THRUST PROPULSION UNIT HAS BEEN CREATED FOR THE SOUND MISSILE AS AN ALTERNATE MEANS OF HIGHLY EFFECTIVE PROPULSION. THIS IS SUBJECT, (AS PREVIOUSLY MENTIONED) TO ANOTHER PATENT TO BE FILED AT A LATER STAGE.

THE **MISSILE THRUST ENGINE EXHAUST** IS LOCATED IN A STANDARD POSITION BEHIND THE SOUND MISSILE'S PROPULSION UNIT. HOWEVER, THE EXACT RESPECTIVE POSITIONS OF THE MISSILE DRONE THRUST ENGINE EXHAUST, AND THE SOLID FUEL COMPARTMENT, WILL BE AGAIN SUBJECT TO ANOTHER PATENT FILING, IN RESPECT OF THE NEWLY DESIGNED PROPULSION UNIT AT A LATER STAGE.

THE **MISSILE SOLID FUEL TANK** IS LOCATED BEHIND THE COMMUNICATIONS SECTION OF THE MISSILE'S FUSELAGE, THUS BEHIND THE GLASS HEAD COVER OF THE SOUND MISSILE. IT IS ALSO LOCATED WITHIN THE PRIMARY CASING OF THE MISSILE'S FUSELAGE, SURROUNDED BY THE MISSILE'S LIQUID FUEL TANKS AND THE AIR GUIDING TUNNELS. THESE, ASIDE OF THEIR OTHER PRIMARY FUNCTION, PROVIDE THE SOLID FUEL TANK WITH ADDITIONAL COOLING OF ITS OUTER SKIN TEMPERATURE.

THE **MISSILE LIQUID FUEL TANK** SURROUNDS THE SOUND MISSILE'S SOLID FUEL COMPARTMENT. IT HOLDS LIQUID FUEL TO PROVIDE A SECONDARY COMBUSTION. THIS COMPARTMENT IS PROTRUDED BY AIR TUNNELS THAT LEAD AIR FROM THE GLASS HEAD AIR INTAKES THROUGH THE COMPLETE LENGTH OF THE MISSILE'S FUSELAGE, EXITING AT THE END INTO THE OPEN AIR. THE OUTER SKIN OF THE LIQUID FUEL TANK IS A ONE PIECE TITANIUM TUBE, COVERING THE COMPLETE INTERIOR STRUCTURE OF THE SOUND MISSILE.

THE **MISSILE GLASS HEAD** IS LOCATED AT THE FRONT OF THE DRONE/SOUND MISSILE. IT IS MOUNTED ON THE SOUND MISSILE FUSELAGE, HELD IN SPECIALLY DESIGNED SUSPENSION UNITS TO BE ABLE TO TRANSMIT THE SONIC VIBRATIONS INTO THE RECOGNISANCE UNIT AND CENTRAL PROCESSOR UNIT. THE HEAD IS MANUFACTURED FROM HIGH QUALITY GLASS OF VERY THIN STRUCTURE TO ALLOW MORE EFFICIENT VIBRATION COLLECTION.

THE COMPLETE GLASS HEAD IS A SEALED UNIT WITH VACUUM INSIDE TO PROTECT THE INTERNALLY MOUNTED HIGHEST SPECIFICATION TECHNOLOGY AGAINST ANY EFFECTS OF THE OUTER ENVIRONMENT. THE GLASS PROPERTIES INCLUDE A VERY HIGH MELTING POINT. THE GLASS HEAD IS FURTHER PENETRATED BY 16 TUBULAR AIR INTAKES THAT ALLOW PASSING AIR TO ENTER INTO THE SPACE BETWEEN THE TWO CASINGS OF THE MISSILE. THE AIR THEN EXITS AT THE BACK OF THE MISSILE'S FUSELAGE INTO OPEN AIR. THE GLASS HEAD COVERS ALL COMMUNICATIONS, CENTRAL PROCESSOR UNIT, VISUAL ANALYSIS SECTION AND, ABOVE ALL, THE SONIC ANALYSIS SECTION.

THE **MISSILE GLASS HEAD SUSPENSION UNIT** PROVIDES THE GLASS HEAD WITH ABILITY TO MOVE BACK AND FORTH. IT ALLOWS THE GLASS COVER TO TRANSMIT THE SONIC VIBRATIONS INTO THE RECOGNITION AND ANALYSIS SECTION, WHERE ALL OUTER SOUNDS ARE PROCESSED SO THAT THE APPROPRIATE ACTION CAN BE TAKEN. THE SONIC VIBRATORY SENSORS ARE IN CONTACT WITH THE GLASS HEAD.

THE **MISSILE GLASS HEAD SEAL** IS DESIGNED TO PROVIDE THE NECESSARY SEAL BETWEEN THE BELOW QUOTED PARTS, BUT STILL ALLOW THE HEAD TO TRANSMIT THE SONIC VIBRATIONS INTO THE RECOGNITION AND ANALYSIS SYSTEM. THE SEAL IS MANUFACTURED FROM SILICONE COMPOUND ABLE TO WITHSTAND VERY HIGH LEVELS OF TEMPERATURE AND PRESSURE. AS THE GLASS HEAD RIM ACTUALLY EXTENDS SLIGHTLY OVER THE ACTUAL OUTER TITANIUM CASING JOINT OF THE SOUND MISSILE, THE SEAL IS POSITIONED IN BETWEEN THESE TWO COMPONENTS OF THE SOUND MISSILE CONSTRUCTION.

THE **CENTRAL PROCESSOR UNIT** IS THE ACTUAL "BRAIN" OF THE SOUND MISSILE AND THEREBY THE PRIME EVALUATION PART OF THE COMPLETE UNIT. ITS CIRCUITS PROVIDE AN IMMEDIATE RECOGNITION WITH REGARD TO ANY RECEIVED SONIC VIBRATIONS, TURNS THEM INSTANTLY INTO DIGITAL AND GRAPHIC PATTERNS, THAT ARE THEN COMPARED WITH THE PROGRAMMED DATABASE OF SONIC PATTERNS TO PROVIDE INSTANT RESULTS. THESE ARE THE BASIS FOR ANY FURTHER ACTION THAT THE SOUND MISSILE UNDERTAKES, AS PROGRAMMED TO DO SO.

NO SONIC DATA WILL BE WASTED. ANY DATA RECEIVED, THAT IS NOT CONSIDERED TO BE OF ANY THREAT, IS INSTANTLY PASSED OVER TO THE COMMAND CENTRE BASED IN THE MIDDLE OF THE DEFENCE PERIMETER. THAT IN TURN MAY DECIDE TO USE SUCH DATA FOR

ISSUING A WARNING TO ANY RESPECTIVE AUTHORITY, SUCH AS AIR TRAFFIC CONTROL, FOR A CIVILIAN AIRCRAFT HEADING INTO A DANGEROUS SITUATION, A SHIP ON A COURSE TO IMPACT INTO ANOTHER SHIP, OR ANY BEARING A SIMILAR RISK SITUATION.

ALL ANALYSED SONIC DATA FROM THE DRONES/SOUND MISSILES THAT IS NOT IDENTIFIED AS FRIENDLY, BUT WHERE THE PERCENTAGE RECOGNITION IS NOT SUFFICIENT TO CONFIRM AS ENEMY, IS ALSO IMMEDIATELY PASSED OVER TO THE COMMAND CENTRE FOR FURTHER EVALUATION THAT MAY RESULT EITHER IN AN ORDER TO TAKE UP AN ATTACK POSITION, OR MAY SIMPLY RESULT IN A NO ACTION ORDER. SONIC DATA THAT HAS BEEN RECOGNISED AS AN APPROXIMATELY 85% MATCH TO THE DATA OF AN ENEMY BOMBER, MISSILE, OR ANYTHING SIMILAR WILL, AS PROGRAMMED, BE THE BASIS FOR AN IMMEDIATE INTERNAL DECISION TO PROCEED WITH A COUNTER ATTACK.

PRIOR TO A CASE OF THIS NATURE, THE THREE CLOSEST POSITIONED DRONES/SOUND MISSILES TO THE EXPECTED PATH OF THE POTENTIAL TARGET COMPARE RESULTS IN RESPECT OF THE ANALYSED DATA BETWEEN THEMSELVES IN A LINKED PROCESS AND PROVIDE THE INDIVIDUAL RESULTS FROM EACH DRONE/SOUND MISSILE TO THE COMMAND CENTRE. THE COUNTER ACTION AUTOMATICALLY GOES AHEAD, UNLESS AN ORDER TO ABORT HAS BEEN RECEIVED BY ANY ONE OF THE THREE DRONES/SOUND MISSILES. SUCH A SITUATION WOULD RESULT IN AN ABORT OF ACTION FOR ALL THREE DRONES INVOLVED AND AN INSTANT RETURN TO THEIR PRIOR RESPECTIVE POSITIONS WITHIN THE DEFENCE PERIMETER.

THE **SONIC VIBRATIONS ANALYSIS UNIT** IS AN INTEGRAL SECTION OF THE CENTRAL PROCESSOR UNIT POSITIONED WITHIN THE GLASS COVERED HEAD OF THE DRONE/MISSILE. ITS FUNCTION IS TO RECEIVE ALL SONIC VIBRATIONS GATHERED BY THE GLASS HEAD AND THE ADDITIONAL SIDE POSITIONED GLASS COVERS, AND TO COMPARE THE DIGITAL AND GRAPHICAL FINGERPRINT OF THE SONIC DATA WITH THE CENTRAL PROCESSOR'S SONIC DATABASE.

THE **SONIC DATABASE UNIT** IS AN INTEGRAL SECTION OF THE CENTRAL PROCESSOR UNIT POSITIONED WITHIN THE GLASS COVERED HEAD OF THE DRONE/SOUND MISSILE. THE PRE PROGRAMMED DATABASE OF ALL KNOWN SOUNDS INCLUDES UNDERSTANDABLY ALL SOUNDS OF POTENTIAL ENEMY WARFARE AND WEAPONRY FOR AN INSTANT COMPARISON BY THE CENTRAL PROCESSOR UNIT.

THE **DIGITAL IMAGING UNIT** IS LOCATED BESIDE THE SOUND RECOGNITION AND ANALYSIS UNITS IN THE SPACE PROVIDED BY THE GLASS HEAD. IT IS FITTED WITH THE HIGHEST AVAILABLE STANDARD OF DIGITAL IMAGING EQUIPMENT AND AN AUTO FOCUS SYSTEM OF THE SAME STANDARD. IT BASICALLY PROVIDES THE SOUND MISSILES WITH A SECOND RECOGNITION BACK-UP AND ENSURES THAT THE SOUND ANALYSIS CAN BE FURTHER MATCHED PRECISELY TO THE

ACTUAL OBJECT THAT IS SOUGHT BY THE SOUND MISSILE FOR DESTRUCTION.

HOWEVER, THE MAIN STREAM OF FUNCTIONS IS CARRIED OUT BY THE SONIC SYSTEMS AND PRACTICALLY ALL COMMUNICATIONS BETWEEN THE DRONES/SOUND MISSILES AND THE COMMAND CENTRE IS BASED ON INITIAL SOUND DETECTION. THE MAIN USE OF THE DIGITAL IMAGING UNIT IS IN SUCH A SITUATION, WHERE A SOUND CANNOT BE MATCHED EXACTLY DUE TO INSUFFICIENT DATA IN THE MEMORY BANKS. ALTERNATIVELY, IN SUCH CASES WHERE THE SOUND MISSILES HAVE BEEN LAUNCHED BY THE COMMAND CENTRE WHERE ABSOLUTE CONFIRMATION OF THE TARGET IS REQUIRED BEFORE ITS DESTRUCTION.

THE **DIGITAL IMAGING DATABASE UNIT** IS AN INTEGRAL SECTION OF THE CENTRAL PROCESSOR UNIT POSITIONED WITHIN THE GLASS COVERED HEAD OF THE DRONE/SOUND MISSILE. THIS DATABASE IS PRE PROGRAMMED WITH ALL KNOWN IMAGES OF WARFARE TECHNOLOGY, AS WELL AS CIVIL OBJECTS, SUCH AS CIVIL AIRCRAFT, A NUMBER OF SHIPS, ETC.

THE UNIT PROVIDES THE COMPARISON FOR THE CENTRAL PROCESSOR UNIT IN RESPECT OF VISUAL IMAGES THAT ARE INSTANTLY COMPARED WITH THE PRE ANALYSED SONIC DATA. DEPENDING ON THE CONDITIONS, THE IMAGING SYSTEM MAINLY RECEIVES THIS DATA IN A USABLE FORM AFTER THE SOUND MISSILE HAS BEEN ACTUALLY LAUNCHED AND HAS ALREADY MADE SOME PROGRESS TOWARDS THE TARGET'S COORDINATES.

THE **DIGITAL IMAGING ANALYSIS UNIT** IS AN INTEGRAL SECTION OF THE CENTRAL PROCESSOR UNIT POSITIONED WITHIN THE GLASS COVERED HEAD OF THE DRONE/SOUND MISSILE. THIS UNIT IS COMPARING ALL RECEIVED IMAGING DATA AND INSTANTLY PASSES RESULTS OF THE COMPARISONS INTO OTHER LINKED SECTIONS OF THE CENTRAL PROCESSOR UNIT, FROM WHERE THIS DATA IS IMMEDIATELY PASSED OVER TO THE COMMAND CENTRE FOR FURTHER ANALYSIS AND FOR DECISIONS TO BE MADE WITH REGARD TO ACTION THAT IS TO BE TAKEN BY THE DRONE/SOUND MISSILE.

THE **OPTICAL UNIT** IS A HIGH QUALITY AUTO ADJUSTING LENS UNIT INCORPORATING A SET OF PRECISION LENSES THAT ALLOW FOR NEAR PERFECT LONG AND SHORT RANGE IMAGING TO BE ESTABLISHED. THE UNIT IS POSITIONED CENTRALLY IN LINE WITH THE HEAD OF THE MISSILE AND IN FRONT OF THE DIGITAL IMAGING UNIT. THE UNIT WILL NOT ENCOUNTER ANY FORM OF TECHNICAL COMPLICATIONS IN RESPECT OF DUST, MISTING, OR ANY PROBLEMS WITH REGARD TO TEMPERATURE CHANGES. THIS IS ENABLED BY THE GLASS HEAD CONSTRUCTION, WHERE THE INNER SPACE IN THE GLASS HEAD AND ALL TECHNOLOGY INSIDE IT, IS VACUUM.

THE **SATELLITE COMMUNICATIONS RECEPTION UNIT** IS AN ACTUAL DOUBLE CHECK UNIT, WHERE IT PROVIDES PERMANENT CONTACT WITH THE EARLY WARNING SATELLITES AS WELL AS RECEIVING THE DATA PASSED OVER FROM THE COMMAND CENTRE OF A SIMILAR NATURE. THEREBY, THE DRONES CAN ACT ON THE EARLY WARNING DATA RECEIVED EITHER DIRECTLY FROM THE SATELLITE SYSTEM, OR ACT ON THE BASIS OF AN ORDER TO INTERCEPT THAT HAS BEEN RECEIVED FROM THE COMMAND CENTRE, WHICH HAS PREVIOUSLY RECEIVED IDENTICAL DATA FROM THE SATELLITE SYSTEM.

THE **GYROSCOPE UNIT** MOUNTED IN THE REAR SECTION OF THE GLASS HEAD PROVIDES THE DRONE IN A STANDARD FLIGHT SITUATION WITH INSTANT INFORMATION IN RESPECT OF THE EXACT ANGLE THE DRONE/SOUND MISSILE IS AT. THIS DATA IS INSTANTLY ANALYSED BY THE CENTRAL PROCESSOR UNIT AND THE RESPECTIVE FLAPS ARE USED BY THE SYSTEM TO MAKE ANY NECESSARY ADJUSTMENTS TO BRING THE DRONE BACK INTO ITS IDEAL FLIGHT POSITION.

THE **GLOBAL POSITIONING UNIT** IS MOUNTED IN THE GLASS HEAD OF THE DRONE/SOUND MISSILE AND SUPPLIES THE CENTRAL PROCESSOR UNIT WITH A CONSTANT DATA FLOW IN REGARD TO ITS EXACT POSITION AT AN EXACT TIME IN THE DEFENDED PERIMETER. IN CASE WEATHER OR ANY OTHER CIRCUMSTANCES HAVE BEEN RESPONSIBLE FOR THE DRONE BEING OFF COURSE, THE GPS SYSTEM IS USED TO EVALUATE HOW FAR OUT THE DRONE IS. THE SYSTEM IS THEN USED TO BRING THE DRONE BACK TO ITS EXACT PREDEFINED POSITION WITHIN THE CIRCUMFERENCE.

THE **CENTRAL COMMAND RECEIVER UNIT** IS LOCATED BEHIND THE GLASS HEAD COVER. THIS RADIO WAVE UNIT PROVIDES A MEANS FOR THE DRONE TO BE IN A STATE OF CONSTANT ALERT, READY TO RECEIVE ANY ORDERS TO ACT FROM THE COMMAND CENTRE. THIS UNIT IS NOT USED FOR STANDARD COMMUNICATIONS. ITS SOLE PURPOSE IS FOR THE RECEPTION OF AN ORDER FOR THE MISSILES TO BE LAUNCHED, TO INTERCEPT THE TARGET, AND DESTROY IT. THE SOUND MISSILES WILL NOT BE LAUNCHED THROUGH AN ORDER THAT HAS BEEN TRANSMITTED FROM THE CENTRAL COMMUNICATIONS UNIT.

THE **CENTRAL COMMUNICATIONS UNIT;** THIS UNIT IS USED BY THE DRONE/SOUND MISSILE FOR TRANSMISSIONS OF ALL RECEIVED DATA INTO THE COMMAND CENTRE FOR FURTHER EVALUATION. THIS UNIT IS SET TO OPERATE ON A DIFFERENT FREQUENCY FROM THE ABOVE UNIT AND IS DESIGNED FOR ALL STANDARD COMMUNICATIONS BETWEEN THE COMMAND CENTRE AND THE DRONES/SOUND MISSILES THAT CIRCLE IN THE DEFENDED PERIMETER.

THIS UNIT PROVIDES A CONSTANT FLOW OF DATA FROM THE DRONES/SOUND MISSILES INTO THE COMMAND CENTRE REGARDLESS OF ITS NATURE. PASSED OVER DATA MAY BE SUBJECT TO AN

EVALUATION AT THE COMMAND CENTRE THAT WILL RESULT IN THE CENTRE PASSING A WARNING TO A CIVIL AIRCRAFT, SHIP, OR ANY OTHER OBJECTS IN DANGEROUS SITUATIONS.

THE **INTER-DRONE COMMUNICATIONS UNIT** IS LINKED TO THE ABOVE SYSTEM AND COMES INTO ACTION ONLY THEN WHEN A TARGET HAS BEEN SELECTED BY THE DEFENCE SYSTEM TO BE DESTROYED. IN SUCH A CASE THE DRONE THAT HAS RECEIVED SONIC DATA AND ANALYSED IT AS ENEMY, OR POTENTIAL ENEMY, THAT DRONE WILL VERIFY ITS OWN EVALUATION OF THE SONIC DATA WITH THE TWO DRONES IN CLOSEST PROXIMITY TO ITSELF, AND THE TARGET. ONLY AFTER THE CONFIRMATION OF THE SONIC DATA BETWEEN THE THREE DRONES, AND A SUFFICIENT MATCH PERCENTAGE, WILL THE COUNTER MEASURE BE TAKEN BY THE THREE DRONES/SOUND MISSILES.

THE **FLIGHT LEVEL ANALYSIS UNIT** IS LOCATED BEHIND THE GLASS HEAD COVER AND ITS SENSORS ARE POINTING TOWARDS THE GROUND SURFACE. ITS PURPOSE IS TO CONSTANTLY SURVEY THE HEIGHT ABOVE SEA LEVEL THAT THE DRONES/SOUND MISSILES ARE SET TO FLY AT. IT IS DIRECTLY LINKED WITH THE CENTRAL PROCESSOR UNIT, SO THAT ANY DATA, WHICH CAN BE EVALUATED AS NOT SATISFACTORY CAN RESULT IN THE CENTRAL PROCESSOR GIVING A COMMAND TO MOTORISED SECTIONS OF THE SYSTEM TO CORRECT ITS FLIGHT LEVEL BACK TO NORMAL.

THE **FORCE ANALYSIS UNIT** IS LOCATED ABOVE THE CENTRE OF GRAVITY OF THE DRONE/SOUND MISSILE, INTERNALLY WITHIN THE ACTUAL FUEL TANKS OF THE DRONE'S THRUST ENGINE. THE PURPOSE OF THIS DEVICE IS TO CONSTANTLY SURVEY THE WEIGHT (FORCE/EXACT TIME STEP), IN PLUS OR MINUS VALUES THAT PRESSES ONTO THE TOP OR BOTTOM SECTION OF THE DRONE/SOUND MISSILE.

IT IS TO BE MANUFACTURED AS ONE UNIT OF TWO GLASS TUBES INSERTED INTO EACH OTHER. THE GLASS TUBES HAVE DIFFERENT DIAMETERS, SO THAT ONE CYLINDRICAL SPACE AND ONE TUBULAR SPACE ARE CREATED. THE GLASS TUBES ARE LINKED TOGETHER AT THE TOP AND BOTTOM SECTIONS. THE TOP AND BOTTOM ENDS OF THE INNER GLASS TUBE ARE SEALED BY TWO MAGNETS INSERTED INSIDE. THESE ARE POLARISED SO THAT EACH NEGATIVELY CHARGED SIDE POINTS INWARDS INTO THE CYLINDRICAL FREE SPACE CREATED WITHIN THE INNER GLASS TUBE.

IN THE SPACE BETWEEN THE TWO MAGNETS THERE IS A DOUBLE SIDED MAGNET FLOATING IN THE AIR IN THE MID SECTION OF THE INNER GLASS TUBE. THE LOWER POSITIONED MAGNET HAS A STRONGER CHARGE TO COUNTERACT THE FORCE OF GRAVITY. THIS IS TO ACHIEVE A SITUATION SO THAT THE MID POSITIONED DOUBLE SIDED MAGNET HOVERS CALMLY AT THE EXACT MIDDLE OF THE INNER GLASS TUBE. THE DOUBLE SIDED MAGNET HAS A SANDWICH CONSTRUCTION. THE TWO MID SECTION POSITIONED MAGNETS ARE

GLUED TOGETHER BY A SEGMENT OF A NON-MAGNETIC MATERIAL. THIS SEGMENT CONTAINS A LIGHT SOURCE THAT EMITS A LIGHT BEAM. THE LIGHT BEAM IS DIRECTED, SO THAT IT PASSES THROUGH THE INNER GLASS TUBE OUTWARDS. IT IS DESIGNED TO POINT CONSTANTLY ONTO A VERTICAL SCALE POSITIONED ON THE INNER WALL OF THE OUTER GLASS TUBE.

EACH SCALE MARKING IS FITTED WITH AN OPTICAL RECEPTION SENSOR LINKED ELECTRONICALLY WITH THE CENTRAL PROCESSOR UNIT. ANY CHANGE OF THE LIGHT BEAM'S POSITION ON THE SCALE, RESULTS IN AN ELECTRONIC SIGNAL BEING SENT TO THE CENTRAL PROCESSOR UNIT. THAT SIGNAL INDICATES THAT A FORCE EQUAL TO, FOR EXAMPLE, ONE UNIT ON THE SCALE HAS BEEN DETECTED. THE DIRECTION, WHICH THE BEAM HAS MOVED FROM ITS CENTRAL POSITION, INDICATES THE DIRECTION OF THE FORCE. THE SYSTEM CAN IMMEDIATELY ANALYSE IF THE DIRECTION AND SIZE OF ANY FORCE IS AFFECTING THE VERTICAL LINE IN THE DRONE'S CENTRE OF GRAVITY. ON RECEPTION OF THE SIGNAL, THE CENTRAL PROCESSOR WILL REACT INSTANTLY. IT WILL SET THE POSITION OF AN APPROPRIATE NUMBER OF FLAPS IN THE OPPOSITE DIRECTION. THIS COUNTERS ANY DETECTED FORCE BY THE FORCE ANALYSIS UNIT.

WHEN THE LIGHT BEAM RETURNS TO ITS CENTRAL POSITION ON THE SCALE IT INDICATES THAT NO MINUS OR PLUS FORCES ARE IN ACTION AT THE CENTRE OF GRAVITY ON THE DRONE'S FUSELAGE. THE STANDARD CRUISING POSITION OF THE DRONE HAS BEEN RE-ESTABLISHED. THE LOWER OF THE TWO CENTRALLY POSITIONED MAGNETS HAS AN ORIFICE PASSING THROUGH ITS BODY. AN ELECTRICAL CABLE IS PASSING THROUGH VERTICALLY INTO THE LOWEST POSITIONED MAGNET. THIS MAGNET IS ALSO FITTED WITH AN ORIFICE IN ITS MIDDLE. THE CABLE THAN PASSES THROUGH THIS MAGNET AND IS LINKED TO AN EXCHANGEABLE BATTERY THAT IS FITTED BENEATH IT. THIS PROVIDES THE NECESSARY ELECTRICAL CHARGE FOR THE LIGHT BEAM AND OPTICAL RECEPTION SENSORS TO FUNCTION.

THIS DATA IS CONSTANTLY BEING PASSED OVER INTO THE CENTRAL PROCESSOR UNIT FOR EVALUATION. IT IS THE BASIS FOR AN IMMEDIATE COUNTERING OF ANY SUCH FORCES BY THE DRONES MOTOR OPERATED FLAPS. THIS SYSTEM, IN CONJUNCTION WITH THE OTHER SURVEILLANCE SYSTEMS, PROVIDES THE COMPLETE UNIT WITH A CLOSE TO PERFECT ABILITY TO HOLD ITS POSITION WITHIN THE DEFENDED CIRCUMFERENCE WITH REGARD TO FLIGHT LEVEL.

THE **DIRECTIONAL ANALYSIS UNIT** IS POSITIONED WITHIN THE GLASS HEAD. ITS MAIN PURPOSE IT ONE OF PROVIDING AN EXACT AIMING ABILITY FOR THE SOUND MISSILE WITH REGARD TO THE SELECTED TARGET AND THE MISSILE'S DIRECTIONAL APPROACH TO THE TARGET TO BE DESTROYED. ITS OTHER PURPOSE IS TO LOCATE THE POSITION FROM WHICH THE RESPECTIVE SONIC DATA RECEIVED, CAME FROM

AND SET ITS EXACT COORDINATES IN CONJUNCTION WITH THE OTHER TWO DRONES/SOUND MISSILES IN CLOSEST PROXIMITY.

THE **ANGLE-TO-TARGET ANALYSIS UNIT** IS POSITIONED IN THE GLASS HEAD BESIDE ALL OTHER RECOGNITION AND SURVEILLANCE SYSTEMS. ITS MAIN PURPOSE IS TO OBSERVE AND REPORT ON THE ANGLES AT ANY GIVEN TIME THAT THE SOUND MISSILE IS CURRENTLY AT IN RESPECT OF THE SELECTED TARGET THAT IS BEING APPROACHED BY THE SOUND MISSILE. UNDER STANDARD MODE OF SURVEILLANCE, THE ABOVE SYSTEM HARDLY COMES INTO ACTION. IN CASE THE ANGLE VARIES FROM THAT WHICH HAS BEEN SELECTED BY THE CENTRAL PROCESSOR UNIT, A CORRECTION IS IMMEDIATELY UNDERTAKEN BY THE SYSTEM.

THE **DISTANCE-TO-TARGET ANALYSIS UNIT** POSITIONED WITHIN THE GLASS HEAD OF THE SOUND MISSILE IS PROGRAMMED TO OBSERVE AND ANALYSE THE DISTANCE TO THE PRE CALCULATED IMPACT POINT WITH THE SELECTED TARGET. IN THE STANDARD MODE OF OPERATION THIS SYSTEM PROVIDES THE ABOVE MENTIONED DATA FOR THE SYSTEM WITH RESPECT TO ANY OBJECT WHOSE SONIC DATA HAS BEEN RECEIVED BY THE SYSTEM, REGARDLESS OF, WHETHER THE OBJECT IS HOSTILE OR NOT. THE ABOVE DATA IS CONSTANTLY REMITTED TO THE COMMAND CENTRE WHERE IT CAN BE FURTHER RE-EVALUATED, A WARNING ISSUED, OR ANOTHER ORDER GIVEN TO THE DRONES/SOUND MISSILES.

THE **TARGET SPEED ANALYSIS UNIT** IS POSITIONED IN THE GLASS HEAD BESIDE ALL OTHER RECOGNITION AND SURVEILLANCE SYSTEMS. ITS MAIN PURPOSE IS TO OBSERVE AND REPORT ON THE SPEED OF THE APPROACHING TARGET WITH RESPECT TO THE SOUND MISSILE. THE DATA IS PASSED INTO THE CENTRAL PROCESSOR UNIT, WHERE IT IS A BASIS FOR FURTHER CALCULATIONS AND ANY CORRECTION MEASURES TO BE UNDERTAKEN BY THE SYSTEM WITH REGARD TO THE ATTACK SEQUENCE ANGLE OF APPROACH THAT THE SOUND MISSILE IS TO TAKE TOWARDS THE OBJECT AT A CERTAIN PRE CALCULATED TIME BEFORE THE IMPACT.

THE **TARGET COORDINATION ANALYSIS UNIT** IS POSITIONED IN THE GLASS HEAD OF THE SOUND MISSILE BESIDE OF THE OTHER SYSTEMS. ITS FUNCTION IS TO GATHER DATA FROM ALL OTHER ANALYSIS AND SURVEILLANCE SYSTEMS AND USE THIS DATA TO CONSTANTLY RE CALCULATE THE IDEAL ANGLE, AND PRECISE POSITION OF THE SOUND MISSILE WITH RESPECT TO THE SELECTED TARGET'S COORDINATES. THIS SYSTEM ALSO HAS THE FUNCTION OF COORDINATING THE EXACT POSITIONS AT ALL TIMES OF ALL THE THREE LAUNCHED MISSILES IN THE ACTION.

THE TWO SOUND MISSILES THAT ARE NOT IN THE CLOSEST PROXIMITY TO THE TARGET TAKE SECONDARY APPROACH POSITIONS, BASED ON THE CHOSEN ACTION OF THE FIRST SOUND MISSILE, TO IMPACT WITH THE SELECTED TARGET. THE SYSTEM INCLUDES THE COORDINATION

DATA OF ALL FOUR OBJECTS AT ONCE, PROVIDING THE REMAINING TWO SOUND MISSILES WITH THEIR OWN PRE IMPACT POSITIONS THAT ARE BASED ON A THEORETICAL POSSIBILITY, THAT THE FIRST SOUND MISSILE MAY NOT IMPACT WITH THE OBJECT AT THE EXACT PRE CALCULATED COORDINATES.

THE **SELF DESTRUCT UNIT** IS POSITIONED BETWEEN THE TWO CASINGS OF THE SOUND MISSILE. AS THE SOUND MISSILE ACTUALLY DOES NOT REQUIRE ITS OWN WARHEAD EXPLOSIVE CHARGE, THIS SELF DESTRUCT DEVICE IS DESIGNED SOLELY FOR THE PURPOSE OF DESTRUCTION IN A RARE CASE, SUCH AS WHEN A DRONE/SOUND MISSILE FALLS INTO ENEMY TERRITORY.

THE ABOVE MODE MAY BE CHOSEN, IF THE SYSTEM SERIOUSLY MALFUNCTIONS AND THE DRONE/SOUND MISSILE IS LIABLE TO IMPACT WITH ANY KIND OF CIVILIAN OBJECT, OR AREA. THE ABOVE SYSTEM IS A FULLY, AUTOMATIC, PRE PROGRAMMED DEVICE, BUT IT CAN ALSO BE ACTIVATED AT ANY GIVEN TIME FROM THE COMMAND CENTRE. IF AN ORDER TO SELF DESTRUCT HAS BEEN RECEIVED FROM THE COMMAND CENTRE, BUT THE FEATURE'S PRIMARY SYSTEM FAILS TO DESTRUCT, A SECONDARY BACK-UP SYSTEM TAKES OVER THE ORDERED TASK.

THE **SELF DESTRUCT CHARGE** IS AN INTEGRAL PART OF THE ABOVE SYSTEM. IT IS DIVIDED INTO EIGHT SMALL CHARGES POSITIONED IN THE MID SECTION OF THE SOUND MISSILE FUSELAGE, BETWEEN THE TWO CASINGS. EACH CHARGE IS WIRED INDIVIDUALLY IN A PARALLEL MANNER TO THE IGNITION. WHEN ANY OF THE CHARGES EXPLODE, THE REST OF THE CHARGES EXPLODE IN SEQUENCE. THE AMOUNT USED FOR ONE CHARGE IS SUFFICIENT FOR SUCH AN IMPACT INTO THE SIDE OF THE SOUND MISSILE, THAT IT WILL IGNITE BOTH THE FUEL TANKS AT ONCE. SUCH AN EXPLOSION WILL DESTROY THE DRONE/SOUND MISSILE OR THE LAUNCHED SOUND MISSILE INSTANTLY AND TOTALLY.

THE **TOP SIDE GLASS COVER** IS MOUNTED ON THE RIGHT HAND, TOP SIDE, AND IN LINE WITH, THE SOUND MISSILE FUSELAGE AT 45 DEGREES UPWARDS FROM THE HORIZONTAL LINE. IT PROVIDES THE SAME FUNCTIONS AS THE FRONT GLASS HEAD COVER, BEING IN THE EXACT LINE OF ANY INCOMING SONIC VIBRATIONS FROM ANYWHERE, RANGING FROM THE STRATOSPHERE OVER TO THE HORIZONTAL PLANE. THIS SECTION IS PURPOSELY NOT DESIGNED AS A SEALED VACUUM UNIT AS ALL THE RECOGNITION AND ANALYSIS TECHNOLOGY INCLUDING THE SECTIONS LINKED WITH THIS UNIT, ARE LOCATED WITHIN THE GLASS HEAD, WHERE THEY ARE SUFFICIENTLY PROTECTED.

THE **TOP SIDE COVER SUSPENSION UNIT** IS LOCATED BENEATH THE ABOVE GLASS COVER AND PROVIDES THE GLASS COVER WITH FLEXIBLE FIXATION IN THE SOUND MISSILE FUSELAGE. THE SUSPENSION UNIT FURTHER ALLOWS THE SONIC VIBRATIONS TO BE

TRANSMITTED FROM THIS UNIT INTO THE CENTRAL PROCESSOR UNIT FOR ANALYSIS AND COMPARISON.

THE **TOP SIDE COVER SEAL** IS MOUNTED BELOW THE TOP SIDE GLASS COVER AND SEALS THE SPACE BETWEEN THE SOUND MISSILE FUSELAGE AND THE TOP SIDE GLASS COVER. THE ABOVE MENTIONED SEAL IS MANUFACTURED FROM HIGH QUALITY SILICONE ABLE TO WITHSTAND HIGH TEMPERATURES AND PRESSURE. THE SEAL IS CONSTRUCTED IN SUCH A MANNER AS TO ALLOW THE VIBRATIONS TO PASS OVER WITH A MINIMUM OF INTERRUPTION.

THE **LOWER SIDE GLASS COVER** IS MOUNTED ON THE RIGHT HAND, BOTTOM SIDE, AND IN LINE WITH, THE SOUND MISSILE FUSELAGE AT 45 DEGREES DOWNWARDS FROM THE HORIZONTAL LINE. IT PROVIDES THE SAME FUNCTIONS AS THE FRONT GLASS HEAD COVER, BEING IN THE EXACT LINE OF ANY INCOMING SONIC VIBRATIONS FROM ANYWHERE, RANGING FROM SEA LEVEL OVER TO THE HORIZONTAL PLANE. THIS SECTION IS PURPOSELY NOT DESIGNED AS A SEALED VACUUM UNIT AS ALL THE RECOGNITION AND ANALYSIS TECHNOLOGY INCLUDING THE SECTIONS LINKED WITH THIS UNIT, ARE LOCATED WITHIN THE GLASS HEAD, WHERE THEY ARE SUFFICIENTLY PROTECTED.

THE **LOWER SIDE COVER SUSPENSION UNIT** IS LOCATED BENEATH THE ABOVE QUOTED GLASS COVER AND PROVIDES THE LOWER SIDE GLASS COVER WITH FLEXIBLE FIXATION IN THE SOUND MISSILE FUSELAGE. THE SUSPENSION UNIT FURTHER ALLOWS THE SONIC VIBRATIONS TO BE TRANSMITTED FROM THIS UNIT INTO THE CENTRAL PROCESSOR UNIT FOR ANALYSIS AND COMPARISON.

THE **LOWER SIDE COVER SEAL** IS MOUNTED BELOW THE LOWER SIDE GLASS COVER AND SEALS THE SPACE BETWEEN THE SOUND MISSILE FUSELAGE AND THE LOWER SIDE GLASS COVER. THE LOWER COVER SEAL IS MANUFACTURED FROM HIGH QUALITY SILICONE COMPOUND ABLE TO WITHSTAND HIGH TEMPERATURES AND PRESSURE. THE SEAL IS CONSTRUCTED IN SUCH A MANNER AS TO ALLOW THE VIBRATIONS TO PASS OVER WITH A MINIMUM OF INTERRUPTION.

THE **RIGHT WING FLAP** IS POSITIONED AT THE REAR SIDE OF THE RIGHT WING SECTION OF THE DRONE'S FUSELAGE. IT IS FULLY INTEGRATED INTO THE WING AND FOLLOWS THE EXACT OUTLINE OF THE DRONE'S FUSELAGE. IT FORMS ONE COMPACT UNIT TOGETHER WITH THE INCORPORATED WING SECTIONS. THE ABOVE FLAP IS MOTORISED AND ITS PURPOSE IS TO CORRECT ANY FLIGHT LEVEL ANGLE, OR HEIGHT DISORDERS EITHER ON ITS OWN, OR IN CONJUNCTION WITH THE LEFT WING FLAP.

THE RIGHT WING FLAP IS MANUFACTURED OF THE SAME MATERIAL AS THE DRONE'S FUSELAGE – KEVLAR$^{ATM}_{A}$ COMPOSITE. THE RIGHT WING FLAP'S CONSTRUCTION FORMS A HOLLOW INNER SPACE, WHEREAS THE INNER SPACE FORMED BY THE DRONE'S FUSELAGE STRUCTURE IS USED

FOR STORAGE OF LIQUID FUEL FOR THE DRONE'S THRUST ENGINE. THIS PART IS FURTHER FILLED WITH EXPANDING FOAM TO PROVIDE STRUCTURAL RIGIDITY, HOWEVER STILL MAINTAIN THE LIGHTWEIGHT PROPERTIES OF THE DRONE/SOUND MISSILE.

THE **LEFT WING FLAP** IS POSITIONED AT THE REAR SIDE OF THE LEFT WING SECTION OF THE DRONE'S FUSELAGE. IT IS FULLY INTEGRATED INTO THE WING AND FOLLOWS THE EXACT OUTLINE OF THE DRONE'S FUSELAGE, FORMING ONE COMPACT FEATURE TOGETHER WITH THE INCORPORATED WING SECTIONS. THE ABOVE FLAP IS MOTORISED AND ITS PURPOSE IS TO CORRECT ANY FLIGHT LEVEL ANGLE, OR HEIGHT DISORDERS EITHER ON ITS OWN, OR IN CONJUNCTION WITH THE RIGHT WING FLAP.

THE LEFT WING FLAP IS MANUFACTURED OF THE SAME MATERIAL AS THE DRONE'S FUSELAGE – KEVLAR(R™) COMPOSITE. THE LEFT WING FLAP'S CONSTRUCTION FORMS A HOLLOW INNER SPACE, WHEREAS THE INNER SPACE FORMED BY THE DRONE'S FUSELAGE STRUCTURE IS USED FOR STORAGE OF LIQUID FUEL FOR THE DRONE'S THRUST ENGINE. THIS PART IS FURTHER FILLED WITH EXPANDING FOAM TO PROVIDE STRUCTURAL RIGIDITY, BUT ALSO MAINTAIN THE DESIRED LIGHTWEIGHT PROPERTIES OF THE DRONE/SOUND MISSILE.

THE **REAR RIGHT SIDE FLAP** IS POSITIONED AT THE FAR REAR END OF THE RIGHT DRONE'S FUSELAGE SECTION. THE ABOVE FLAP PROTRUDES OUTWARDS AT AN ANGLE FROM THE DRONE'S FUSELAGE. IT FORMS A WING PROFILE THAT PROVIDES ADDITIONAL AMOUNT OF LIFT TO THE COMPLETE FUSELAGE STRUCTURE. HOWEVER, AT THE SAME TIME DUE TO ITS CONSTRUCTION, IT ACTS AS AN ADDITIONAL MEANS FOR CHANGE OF FLIGHT DIRECTIONAL OF THE DRONE/MISSILE. THE REAR RIGHT SIDE FLAP IS MOUNTED TO THE DRONE'S FUSELAGE BY MEANS OF A CIRCULAR SHAPED SLIDING PART POSITIONED IN LINE WITH THE ABOVE FLAP.

THIS PROVIDES ACTION THAT IS MORE EFFICIENT EVEN WHEN SMALLER ANGLE STEPS ARE USED BY THE MOTORISED SECTION AND LOWERS THE LEVEL OF STRESS FORCES. THE ABOVE FLAP CORRECTS ANY FLIGHT LEVEL ANGLE, OR HEIGHT DISORDERS, EITHER ON ITS OWN, OR IN CONJUNCTION WITH THE REAR LEFT SIDE FLAP. THE REAR RIGHT SIDE FLAP IS MANUFACTURED OF THE SAME MATERIAL AS THE DRONE'S FUSELAGE – KEVLAR(R™) COMPOSITE. THE ABOVE QUOTED FLAP'S CONSTRUCTION FORMS A HOLLOW INNER SPACE. THIS PART IS FURTHER FILLED WITH EXPANDING FOAM TO PROVIDE STRUCTURAL RIGIDITY, HOWEVER STILL MAINTAIN THE LIGHTWEIGHT PROPERTIES OF THE DRONE/SOUND MISSILE.

THE **REAR LEFT SIDE FLAP** IS POSITIONED AT THE FAR REAR END OF THE LEFT DRONE'S FUSELAGE SECTION. THE ABOVE FLAP PROTRUDES OUTWARDS AT AN ANGLE FROM THE DRONE'S FUSELAGE. IT FORMS A WING PROFILE THAT PROVIDES ADDITIONAL AMOUNT OF LIFT TO THE COMPLETE FUSELAGE STRUCTURE. HOWEVER, AT THE SAME TIME DUE

TO ITS CONSTRUCTION, IT ACTS AS AN ADDITIONAL MEANS FOR CHANGE OF FLIGHT DIRECTIONAL OF THE DRONE/MISSILE. THE REAR LEFT SIDE FLAP IS MOUNTED TO THE DRONE'S FUSELAGE BY MEANS OF A CIRCULAR SHAPED SLIDING PART POSITIONED IN LINE WITH THE ABOVE FLAP.

THIS PROVIDES EFFICIENT ACTION EVEN WHEN SMALLER ANGLE STEPS ARE USED BY THE MOTORISED SECTION AND LOWERS THE LEVEL OF STRESS FORCES. THE ABOVE FLAP CORRECTS ANY FLIGHT LEVEL ANGLE, OR HEIGHT DISORDERS EITHER ON ITS OWN, OR IN CONJUNCTION WITH THE REAR RIGHT SIDE FLAP. THE REAR LEFT SIDE FLAP IS MANUFACTURED OF THE SAME MATERIAL AS THE DRONE'S FUSELAGE – KEVLAR REINFORCED COMPOSITE. THE ABOVE QUOTED FLAP'S CONSTRUCTION FORMS A HOLLOW INNER SPACE. THIS PART IS FURTHER FILLED WITH EXPANDING FOAM TO PROVIDE STRUCTURAL RIGIDITY, HOWEVER MAINTAIN THE LIGHTWEIGHT PROPERTIES OF THE DRONE/SOUND MISSILE.

THE **STABILISER** IS POSITIONED CENTRALLY, IN LINE, AND ON THE TOP REAR PART OF THE DRONE'S FUSELAGE. ITS STRUCTURE IS OF KEVLAR COMPOSITE. IT FORMS A FULLY INTEGRATED PART, AND SINGLE CONSTRUCTION UNIT WITH THE DRONE'S FUSELAGE. ITS PURPOSE IS TO PROVIDE THE DRONE/SOUND MISSILE WITH A MAXIMUM LEVEL OF AUTOMATIC DIRECTIONAL HOLD IN STRAIGHT LINE FLIGHT, WITHOUT THE NEED FOR ANY OTHER MEANS. ITS OTHER PURPOSES ARE TO PROVIDE A HOLDING POINT AND A PLACE FOR THE MOTORISED UNITS FOR THE DRONE'S RUDDER. THIS PART IS FURTHER FILLED WITH EXPANDING FOAM TO PROVIDE STRUCTURAL RIGIDITY, HOWEVER MAINTAIN THE LIGHTWEIGHT PROPERTIES OF THE DRONE/SOUND MISSILE.

THE **RUDDER** IS LINKED TOGETHER AND MOUNTED WITHIN THE STABILISER IN A SERIES OF TURNING JOINTS. THE RUDDER IS FURTHER MOTORISED BY TWO UNITS THAT ARE GEARED DOWN TO PROVIDE SUFFICIENT COUNTER FORCE TO THE AIR FLOW AROUND THE STABILISER AND THE RUDDER. THIS PART IS MANUFACTURED OF KEVLAR COMPOSITE THE SAME AS THE DRONE'S FUSELAGE AND OTHER ABOVE MENTIONED PARTS. THIS PART IS FURTHER FILLED WITH EXPANDING FOAM TO PROVIDE STRUCTURAL RIGIDITY, BUT MAINTAIN THE LIGHTWEIGHT PROPERTIES OF THE DRONE/SOUND MISSILE.

THE **PARACHUTE** IS POSITIONED IN ITS COMPARTMENT, READY TO BE EJECTED OUT OF THIS SECTION BY THE FORCE PROVIDED BY SMALL, DIRECTED, EXPLOSIVE CHARGE THAT WOULD BE USED BY THE DRONE'S SYSTEM TO SALVAGE A DRONE/SOUND MISSILE THAT SHOWS SIGNS OF A DEFECT. PRIOR TO THIS, A KEVLAR COMPOSITE COVER WOULD BE OPENED BY THE SYSTEM. THIS COVER WOULD THEN BE PULLED AWAY FROM THE FUSELAGE BY THE BASIC AIR FLOW PROVIDED BY THE FLIGHT SPEED.

ALTHOUGH, THE PROCEDURE OF THE PARACHUTE EJECTING SYSTEM IS FULLY AUTOMATIC, IT CAN ALSO BE TRIGGERED INDEPENDENTLY FROM THE COMMAND CENTRE. ALL ELASTIC PARACHUTE LINES, JOINING THE PARACHUTE WITH THE DRONE'S FUSELAGE, MEET IN ONE JOINT. THIS POINT IS LOCATED PRECISELY ABOVE THE CENTRE OF GRAVITY OF THE DRONE/SOUND MISSILE, IN THE TOP SECTION. ONCE THE PARACHUTE HAS BEEN EJECTED FROM ITS COMPARTMENT THE DRONE/SOUND MISSILE LANDS SAFELY ON THE GROUND, OR ON THE SEA SURFACE TO BE COLLECTED AND EXAMINED FOR THE SYSTEM DEFECTS THAT LED TO THE EVENT.

THE **PARACHUTE COMPARTMENT** IS AN OTHERWISE HOLLOW COMPARTMENT, THAT IS POSITIONED IN THE TOP SECTION OF THE DRONE FUSELAGE. THE PARACHUTE, EJECTING MECHANISM, AND ITS EJECTING CHARGE ARE LOCATED IN THIS COMPARTMENT. THE COMPARTMENT IS SEALED FROM THE TOP OF THE DRONE'S FUSELAGE BY AN OUTER KEVLAR COMPOSITE COVER, THAT COPIES PRECISELY THE OUTER LINES OF THE FUSELAGE STRUCTURE.

THE **PARACHUTE EXPLOSIVE THRUST CHARGE** CONSISTS OF A VERY SMALL ROCKET LIKE DEVICE THAT IS POSITIONED IN THE PARACHUTE COMPARTMENT. THIS DEVICE PROVIDES THE PARACHUTE WITH A SUFFICIENT, PRECISELY DIRECTED FORCE THAT IN EFFECT THRUSTS THE PARACHUTE OUT OF ITS TOP POSITIONED COMPARTMENT. AS THE CHARGE ROCKET SHOOTS OUT OF THE COMPARTMENT IT PULLS BEHIND IT, A SPECIAL MATERIAL LINE THAT IS LINKED TO THE TOP CENTRE PART OF THE PARACHUTE. THEREBY THE PARACHUTE IS PULLED OUT INSTANTLY AND OPENS WHEN ITS LINES ARE FULLY EXTENDED. THE ABOVE CHARGE BURNS OUT ALMOST IMMEDIATELY AS IT IS OF NO FURTHER USE.

THE **DRONE THRUST TURBINE ENGINE**, A RELATIVELY SMALL UNIT IN SIZE, IT IS POSITIONED CENTRALLY, IN LINE AND OVER THE MISSILE PROPULSION UNIT. BOTH ENGINES ARE EXACTLY IN LINE WITH EACH OTHER. THE ENGINE DOES NOT NEED TO BE OF A LARGE SIZE, AS THRUST TURBINE ENGINES ARE AVAILABLE, THAT WILL PROVIDE THE DRONE/SOUND MISSILE WITH THE MAXIMUM REQUIRED SPEED OF APPROXIMATELY 400 MPH, WHEN THE COMPLETE (DRONE/SOUND MISSILE) UNIT, IS FULLY LOADED, IT SHOULD NOT EXCEED A TOTAL WEIGHT OF 800 KG. THE ONLY OTHER REQUIREMENT WITH REGARD TO THIS DRONE ENGINE IS THAT IT HAS VERY LOW FUEL CONSUMPTION.

THE **DRONE THRUST ENGINE EXHAUST** OF A CLASSICAL SHAPE IT IS POSITIONED BEHIND THE DRONE'S THRUST ENGINE AT THE OUTER END OF THE DRONE'S FUSELAGE. IT IS PARTIALLY COVERED IN RESPECT OF THE SECOND, SOUND MISSILE'S EXHAUST, WITH AN EXTENDED SECTION OF THE DRONE'S FUSELAGE POINTING OUTWARDS FROM THE REAR.

THE **DRONE FUEL TANK** IS FORMED BY THE COMPLETE SECTIONS OF THE DRONE'S FUSELAGE THAT ARE NOT USED FOR ANY OTHER PURPOSE. THE FUSELAGE INTERIOR STRUCTURE IS DIVIDED BY STRUCTURAL WALLING, THAT INCLUDES OPENINGS FOR THE FUEL TO MOVE IN A CONTROLLED MANNER FROM ONE SECTION TO ANOTHER. THE INTERNAL WALLING ALSO PROVIDES SUFFICIENT RIGIDITY TO COMPLETE STRUCTURE OF THE DRONE'S FUSELAGE.

THE INDIVIDUAL FEATURES OF THE INVENTION INTERACT IN THE FOLLOWING MANNER:

THE **COMMAND CENTRE** INTERACTS PRIMARILY WITH THE EARLY WARNING SATELLITE SYSTEM AND THE INDIVIDUAL DRONES/SOUND MISSILES WITHIN THE DEFENDED PERIMETER. IT IS THE PROVIDER AS WELL AS THE MAIN RECEIVER OF ALL SONIC AND IMAGING DATA COLLECTED BY THE DEFENCE SYSTEM AND THE PRIME EVALUATOR OF THIS DATA. IT IS ALSO IN SOLE COMMAND OF THE COMPLETE DEFENCE SYSTEM.

THE COMMAND CENTRE MAY GIVE FOR INSTANCE ORDERS TO COUNTER ATTACK A HOSTILE OBJECT, MAY STOP AT ANY TIME THE DEFENCE SYSTEM REACTING AUTOMATICALLY, MAY ORDER AN INDIVIDUAL DRONE/SOUND MISSILE TO SELF DESTRUCT, OR GIVE THE SAME ORDER TO ANY NUMBER OF THEM. THE COMMAND CENTRE MAY ALSO INCLUDE ADDITIONAL GROUND BASED DIRECTED SONIC RECOGNITION UNITS OF A LARGER SIZE, THAT CAN FORM ANOTHER CONTROL MECHANISM OVER THE COMPLETE DEFENCE SYSTEM, AS WELL AS PROVIDE IT WITH BETTER EFFICIENCY.

THE **DEFENCE PERIMETER,** INTERACTS WITH NO PART OF THE INVENTION EXCEPT FOR THE DRONE, WHERE IT PROVIDES THE EXACT COORDINATES OF THE CIRCUMFERENCE, AND THAT THE DRONES/SOUND MISSILES COPY IN THEIR FLIGHT OVER THE DEFENDED TERRITORY.

THE **DRONE** INTERACTS AT ALL TIMES WITH THE COMMAND CENTRE AS WELL AS WITH ITS SOUND MISSILE. IT ALSO INTERACTS WITH ALL THE OTHER DRONES IN THE CIRCUMFERENCE AND ESPECIALLY IT INTERACTS WITH THE TWO DRONES/SOUND MISSILES IN CLOSEST PROXIMITY.

THE **SOUND MISSILE** INTERACTS PRIMARILY WITH THE COMMAND CENTRE AND THEN WITH ITS OWN CARRIER DRONE. IN AN INCIDENT SITUATION IT ALSO INTERACTS WITH THE OTHER, TWO SOUND MISSILES LAUNCHED TO COUNTER ATTACK THE SELECTED TARGET. THE SOUND MISSILE FULLY INTERACTS WITH ALL THE SONIC AND IMAGING EQUIPMENT POSITIONED WITHIN ITS GLASS HEAD. THIS DATA IS THE BASIS FOR THE SOUND MISSILE TO CHANGE ITS FLIGHT PATH, DIRECTION, ETC.

THE **MISSILE LAUNCH TUBE**; ALTHOUGH THE LAUNCH TUBE DOES NOT APPARENTLY INTERACT WITH ANY PART OF THE INVENTION, IT IS LINKED TO THE LAUNCHING PROCESS OF THE SOUND MISSILE. FURTHERMORE, DUE TO ITS CONSTRUCTION, IT IS AN INTEGRAL PART OF THE DRONE'S FUSELAGE.

THE **MISSILE LOCKING MECHANISM** INTERACTS WITH THE SOUND MISSILE, WHERE IT PROVIDES FIXATION OF THE MISSILE WITHIN THE FUSELAGE OF THE DRONE. IT FURTHER PROVIDES THE SOUND MISSILE WITH AN ABILITY TO BE LAUNCHED WHEN NECESSARY. THE ABOVE MECHANISM IS FULLY CONTROLLED BY THE CENTRAL PROCESSOR OF THE DRONE/SOUND MISSILE.

THE **MISSILE FLAP RETRACTION GROOVES** ARE AN INTEGRAL PART OF THE MISSILE LAUNCH TUBE AND THUS OF THE DRONE'S FUSELAGE. AS SUCH THE RETRACTION GROOVES INTERACT WITH THE SOUND MISSILE'S FLAPS, WHERE THE FLAPS ACTUALLY RETRACT AND SLOT INTO THE GROOVES AND PROVIDE AN IDEAL AND EXACT PRE LAUNCH POSITION FOR THE SOUND MISSILE.

THE **MISSILE FRONT DIRECTIONAL FLAPS** INTERACT ONE WITH ANOTHER AS WELL AS WITH THE SECOND SET OF REAR DIRECTIONAL FLAPS. THEY ARE OPERATED SOLELY BY THE CENTRAL PROCESSOR UNIT, WHEN THE FLIGHT DIRECTION OF THE SOUND MISSILE, IN DEFENSIVE ACTION NEEDS TO BE CHANGED OR ADAPTED. THE FRONT DIRECTIONAL FLAPS ENABLE THE SOUND MISSILE TO CHOOSE AN APPROACH TO TARGET UNDER A PRE CALCULATED ATTACK ANGLE AND ENABLE THE MISSILE TO TURN A COMPLETE CIRCLE WHERE NECESSARY.

THE **MISSILE REAR DIRECTIONAL FLAPS** INTERACT ONE WITH ANOTHER AS WELL AS WITH THE SECOND SET OF FRONT DIRECTIONAL FLAPS. THEY ARE OPERATED SOLELY BY THE CENTRAL PROCESSOR UNIT, WHEN THE FLIGHT DIRECTION OF THE SOUND MISSILE, IN DEFENSIVE ACTION NEEDS TO BE CHANGED OR ADAPTED. THE REAR DIRECTIONAL FLAPS ENABLE THE SOUND MISSILE TO CHOOSE AN APPROACH TO TARGET UNDER A PRE CALCULATED ATTACK ANGLE AND ENABLE THE MISSILE TO TURN A COMPLETE CIRCLE WHERE NECESSARY.

THE **MISSILE THRUST PROPULSION UNIT** INTERACTS SOLELY WITH THE SOUND MISSILE, PROVIDING IT WITH SUFFICIENT THRUST TO ACHIEVE THE SPEED REQUIRED TO APPROACH THE SELECTED TARGET IN THE SHORTEST POSSIBLE TIME SPAN. THE PROPULSION UNIT IS POWERED FROM ITS TANKS POSITIONED WITHIN ITS OWN FUSELAGE.

THE **MISSILE THRUST ENGINE EXHAUST** INTERACTS PURELY WITH THE MISSILE THRUST PROPULSION UNIT. IT PROVIDES THE PROPULSION UNIT WITH A DIRECTED AND CONTROLLED OUTLET OF THE THRUST PRESSURE AND BURNED OUT FUEL.

THE **MISSILE SOLID FUEL TANK** INTERACTS SOLELY WITH THE SOUND MISSILE'S PROPULSION UNIT, WHERE IT PROVIDES THE UNIT WITH A SUFFICIENT SOLID FUEL RESERVE TO FULFIL ITS PURPOSE.

THE **MISSILE LIQUID FUEL TANK** INTERACTS SOLELY WITH THE SOUND MISSILE'S PROPULSION UNIT, WHERE IT PROVIDES THE UNIT WITH A SUFFICIENT LIQUID FUEL RESERVE TO FULFIL ITS PURPOSE.

THE **MISSILE GLASS HEAD** INTERACTS WITH THE GLASS HEAD SUSPENSION UNIT, WHICH ENABLES IT TO BE FREELY SUSPENDED WITHIN THE CONSTRUCTION OF THE SOUND MISSILE AND THE DRONE. IT INTERACTS WITH THE MISSILE GLASS HEAD SEAL BECAUSE IT IS IN CONTACT WITH IT. IT' PROVIDES THE COMPLETE TECHNOLOGY AND EQUIPMENT MOUNTED WITHIN ITSELF, WITH OUTER ENVIRONMENTAL PROTECTION. IT FURTHER PROVIDES THE SONIC RECOGNITION AND ANALYSIS EQUIPMENT WITH THE ABILITY TO RECEIVE THE SONIC DATA OF A HIGH QUALITY. THE GLASS HEAD FURTHER INTERACTS WITH THE DIGITAL IMAGING EQUIPMENT, WHERE IT PROVIDES IT WITH AN ABILITY TO "SEE" AND DETECT ANY TARGET IN REACH.

THE **MISSILE GLASS HEAD SUSPENSION UNIT** INTERACTS WITH THE MISSILE GLASS HEAD, WHERE IT PROVIDES THE HEAD WITH AN ABILITY TO BE FREELY SUSPENDED WITHIN THE CONSTRUCTION OF THE SOUND MISSILE AND THE DRONE. YET, LEAVES IT STILL ABLE TO COLLECT SONIC VIBRATIONS OF SUCH A QUALITY, WHICH CAN THEN BE TRANSFORMED INTO THE NECESSARY DATA, USED BY THE SYSTEM FOR PRECISE TARGET RECOGNITION.

THE **MISSILE GLASS HEAD SEAL** INTERACTS WITH THE MISSILE GLASS HEADS PROVIDING IT WITH THE REQUIRED SEALING ABILITY IN REGARD TO THE EXTERIOR. IT PROVIDES AN EFFECTIVE SEAL BETWEEN THE GLASS HEAD OF THE SOUND MISSILE AND THE ACTUAL SOUND MISSILE FUSELAGE THAT IS SUBJECT TO HIGH TEMPERATURES, EXPANSION, AND PRESSURE.

THE **CENTRAL PROCESSOR UNIT** INTERACTS FULLY WITH ALL OTHER PARTS OF THE INVENTION AS IT IS PRECISELY THIS PART THAT CONTROLS ALL THE FUNCTIONS OF THE DRONE/SOUND MISSILE OR THE SOUND MISSILE ON ITS OWN. THE CENTRAL PROCESSOR UNIT ALSO INTERACTS WITH OTHER PROCESSOR UNITS OF THE DRONES/SOUND MISSILES IN CLOSE PROXIMITY, OR THE SOUND MISSILES PROCESSOR UNITS ON THEIR OWN. THE CENTRAL PROCESSOR UNIT FURTHER INTERACTS WITH THE COMMAND CENTRE, WHERE IT PASSES ON ALL DATA THAT HAS BEEN RECOGNISED OR ANALYSED BY THE INTERNALLY MOUNTED EQUIPMENT AND COMPARED WITH THE RESPECTIVE DATABASES OF THE MISSILES.

THE **SONIC VIBRATIONS ANALYSIS UNIT** IS AN INTEGRAL PART OF THE CENTRAL PROCESSOR UNIT. IT COLLECTS THE RECEIVED SONIC DATA, ANALYSES IT, AND PASSES IT OVER TO OTHER SECTIONS OF THE CENTRAL PROCESSOR UNIT FOR ACTION TO BE TAKEN OR OTHERWISE.

THEREBY, IT INTERACTS WITH THE CENTRAL PROCESSOR UNIT, THE COMMAND CENTRE AND THE SENSORS POSITIONED WITHIN THE GLASS HEAD AND THE OTHER TWO GLASS COVERS.

THE **SONIC DATABASE UNIT** INTERACTS WITH THE SONIC VIBRATIONS ANALYSIS UNIT AND WITH THE CENTRAL PROCESSOR UNIT, OF WHICH IT IS AN INTEGRAL PART. THUS, IT ALSO INTERACTS WITH THE COMMAND CENTRE, IN CONJUNCTION WITH THE PROCESSOR UNIT, AS THE RECEIVED SONIC DATA IS ACTUALLY COMPARED WITH THE DATA PRE PROGRAMMED INTO THIS UNIT. THE DATABASE IS ALSO CONSTANTLY BEING BROADENED BY THE SYSTEM WITH NEW DATA ADDITIONS THAT HAVE NOT BEEN PREVIOUSLY PROGRAMMED INTO THE DATABASE PRIOR TO ITS LAUNCH.

THE **DIGITAL IMAGING UNIT** INTERACTS WITH ALL OTHER IMAGING TECHNOLOGY MOUNTED WITHIN THE SOUND MISSILE GLASS HEAD. IT USES THE OPTICAL UNIT TO GATHER THE REQUIRED PICTORIAL IMAGES, WHERE IT TURNS THESE INTO DIGITAL FORM AND PASSES THEM OVER TO THE OTHER RECOGNITION AND ANALYSIS SYSTEMS. IT FURTHER INTERACTS WITH THE CENTRAL PROCESSOR UNIT AND THE DATABASE UNIT, AS THESE ARE USED FOR COMPARISON AND FINAL EVALUATION PRIOR TO A RESULT BEING PASSED OVER TO THE COMMAND CENTRE.

THE **DIGITAL IMAGING DATABASE UNIT** INTERACTS WITH THE DIGITAL IMAGING UNIT, WHERE IT PROVIDES IT WITH PRE PROGRAMMED IMAGING DATA, GIVING IT THE ABILITY TO MAKE COMPARISONS. THE ABOVE UNIT IS ALSO AN INTEGRAL PART OF THE CENTRAL PROCESSOR UNIT, THEREBY IT INTERACTS WITH IT AS WELL. RECOGNISED IMAGES ARE PASSED OVER TO THE COMMAND CENTRE FOR FURTHER EVALUATION. NEW IMAGING DATA THAT IS NOT OF A HOSTILE CHARACTER IS THEN ADDED TO THIS UNIT FOR ANY FUTURE ENCOUNTERS WITH THE SAME.

THE **DIGITAL IMAGING ANALYSIS UNIT** INTERACTS WITH THE DIGITAL IMAGING UNIT AND THE DIGITAL IMAGING DATABASE UNIT, WHERE IT PROVIDES THE ABILITY TO COMPARE THE COLLECTED IMAGING DATA WITH THOSE PRE PROGRAMMED INTO THE DATABASE AND PROVIDES RESULTS. THESE ARE THEN PASSED OVER TO THE CENTRAL PROCESSOR UNIT, WHICH PASSES THAT DATA ON TO THE COMMAND CENTRE FOR FURTHER EVALUATION AND AWAITS DECISIONS ON UNDERTAKINGS. IT IS AN INTEGRAL PART OF THE CENTRAL PROCESSOR UNIT, THUS IT ALSO INTERACTS WITH IT.

THE **OPTICAL UNIT** INTERACTS WITH ALL OTHER PARTS OF THE IMAGING RECOGNITION AND ANALYSIS EQUIPMENT, WHERE IT PROVIDES PRIMARY FORM OF IMAGES INTO THE IMAGING EQUIPMENT. ALTHOUGH IT DOES NOT INTERACT IN ANY MANNER WITH THE MISSILE GLASS HEAD, IT IS POSITIONED WITHIN IT AND THE GLASS COVER PROTECTS IT FROM OUTER ENVIRONMENT AND GIVES IT THE ABILITY TO COLLECT THE IMAGING DATA. IT FURTHER INTERACTS

WITH THE CENTRAL PROCESSOR UNIT, AS IT IS DIRECTLY OPERATED BY IT.

THE **SATELLITE COMMUNICATIONS RECEPTION UNIT** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, AND PROVIDES THE SYSTEM WITH AN ABILITY TO RECEIVE ANY EARLY WARNING SATELLITE DATA IN REGARD TO ANY MISSILE LAUNCH, OR SIMILAR EVENT, PRIOR TO BEING ORDERED TO ACT UPON SUCH AN INCIDENT. IT ALSO PROVIDES THE DEFENCE SYSTEM WITH A DOUBLE CHECK ON DATA RECEIVED FROM THE COMMAND CENTRE AND DATA RECEIVED FROM THE SATELLITE SYSTEM.

THE **GYROSCOPE UNIT** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHERE IT SUPPLIES THE ABOVE UNIT WITH INSTANT DATA IN RESPECT OF THE IMMEDIATE FLIGHT CHARACTERISTICS OF THE DRONE/SOUND MISSILE, AND ALLOWS THE CENTRAL PROCESSOR TO CORRECT SUCH CHARACTERISTICS IMMEDIATELY.

THE **GLOBAL POSITIONING UNIT** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH DATA IN RESPECT OF THE EXACT POSITION OF THE DRONE/SOUND MISSILE IN THE CIRCUMFERENCE THAT FORMS THE DEFENDED PERIMETER. SUCH DATA THEN ALLOWS THE CENTRAL PROCESSOR UNIT TO CORRECT THE POSITION OF A DRONE THAT IS MOMENTARILY, FOR ANY REASON, OFF COURSE.

THE **CENTRAL COMMAND RECEIVER UNIT** INTERACTS SOLELY WITH THE CENTRAL PROCESSOR UNIT AND PROVIDES IT WITH THE ORDERS TO INTERCEPT AND DESTROY THE SELECTED TARGET. THIS UNIT IS NOT USED FOR ANY OTHER PURPOSE.

THE **CENTRAL COMMUNICATIONS UNIT** INTERACTS WITH THE CENTRAL PROCESSOR UNIT AND PROVIDES A TWO WAY COMMUNICATIONS CHANNEL BETWEEN THE COMMAND CENTRE AND THE DRONE/SOUND MISSILE, OR THE SOUND MISSILE ON ITS OWN. IT IS THE STANDARD MEANS OF ALL DATA COMMUNICATION.

THE **INTER-DRONE COMMUNICATIONS UNIT** INTERACTS SOLELY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT ENABLES IT TO COMMUNICATE THROUGH THIS SINGLE PURPOSE CHANNEL WITH THE OTHER DRONES/SOUND MISSILES, OR SOUND MISSILES ON THEIR OWN, IN THE CLOSEST PROXIMITY.

THE **FLIGHT LEVEL ANALYSIS UNIT** INTERACTS SOLELY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH CONSTANT DATA FLOW IN RESPECT OF THE FLIGHT LEVEL OF THE RESPECTIVE DRONE/SOUND MISSILE, OR THE SOUND MISSILE ON ITS OWN. IT ENABLES THE CENTRAL PROCESSOR TO UNDERTAKE CORRECTIONS OF THE FLIGHT LEVEL, WHICH THE DRONE/SOUND MISSILE CURRENTLY IS AT.

THE **FORCE ANALYSIS UNIT** INTERACTS SOLELY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH DATA IN RESPECT OF FORCES THAT THE DRONE'S FUSELAGE IS CURRENTLY SUBJECT TO AND THEIR VALUES AND DIRECTIONS. IT ENABLES THE CENTRAL PROCESSOR UNIT TO UNDERTAKE CORRECTIONS OF THE FLIGHT CHARACTERISTICS TO COUNTER THESE FORCES IMMEDIATELY.

THE **DIRECTIONAL ANALYSIS UNIT** INTERACTS PRIMARILY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH DATA IN RESPECT OF THE DRONE'S FLIGHT DIRECTION, ANGLES, AND THEIR VALUES. IT ENABLES THE CENTRAL PROCESSOR UNIT TO UNDERTAKE CORRECTIONS OF THE FLIGHT DIRECTION TO COUNTER ANY FAULTS IMMEDIATELY. IT FURTHER INTERACTS WITH THE COMMAND CENTRE, AS THE ABOVE DATA IS ALSO PASSED OVER CONSTANTLY TO THE COMMAND CENTRE..

THE **ANGLE-TO-TARGET ANALYSIS UNIT** INTERACTS PRIMARILY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH DATA IN RESPECT OF THE SOUND MISSILE'S ANGLE TO THE TARGET, AND ITS IMMEDIATE VALUE. IT ENABLES THE CENTRAL PROCESSOR UNIT TO UNDERTAKE CORRECTIONS OF THE DIRECTIONAL FLIGHT PATH TO LEAD THE SOUND MISSILE ON ITS PRE CALCULATED TRAJECTORY TOWARDS THE SELECTED TARGET AND CORRECTS ITS DIRECTION IMMEDIATELY IN A CASE WHERE IT IS OFF THE CHOSEN COURSE. IT FURTHER INTERACTS WITH THE COMMAND CENTRE, AS THE ABOVE DATA IS ALSO PASSED OVER CONSTANTLY TO THE COMMAND CENTRE.

THE **DISTANCE-TO-TARGET ANALYSIS UNIT** INTERACTS PRIMARILY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH DATA IN RESPECT OF THE SOUND MISSILE'S DISTANCE TO THE SELECTED TARGET, THUS THE IMPACT COORDINATES, AND THE RESPECTIVE VALUES. IT ENABLES THE CENTRAL PROCESSOR UNIT TO CONSTANTLY UPDATE THE CALCULATIONS IN RESPECT OF THE DISTANCE AND OTHER RELATED FACTORS AND TO COUNTER ANY FAULTS IMMEDIATELY. IT FURTHER INTERACTS WITH THE COMMAND CENTRE, AS THE ABOVE DATA IS ALSO PASSED OVER CONSTANTLY TO THE COMMAND CENTRE.

THE **TARGET SPEED ANALYSIS UNIT** INTERACTS PRIMARILY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH DATA IN RESPECT OF THE SELECTED TARGET'S FLIGHT SPEED. IT ENABLES THE CENTRAL PROCESSOR UNIT TO CONSTANTLY UPDATE THE CALCULATIONS IN RESPECT OF THE SOUND MISSILE, ITS FLIGHT, DIRECTIONAL DATA, AND OTHER CHARACTERISTICS, SO THAT ANY IRREGULARITIES CAN BE IMMEDIATELY COUNTERED. IT FURTHER INTERACTS WITH THE COMMAND CENTRE, AS THE ABOVE DATA IS ALSO PASSED OVER CONSTANTLY TO THE COMMAND CENTRE.

THE **TARGET COORDINATION ANALYSIS UNIT** INTERACTS PRIMARILY WITH THE CENTRAL PROCESSOR UNIT, WHERE IT PROVIDES IT WITH DATA IN RESPECT OF THE SELECTED TARGET COORDINATES AT ANY

GIVEN TIME. IT ENABLES THE CENTRAL PROCESSOR UNIT TO MAKE INSTANT NEW CALCULATIONS IN RESPECT OF THE TARGET'S POSITION, PROVIDING APPROPRIATE FLIGHT, DIRECTIONAL CHARACTERISTICS, ETC., FOR THE SOUND MISSILE. THUS, ANY FACTOR THAT MAY TAKE THE SOUND MISSILE OFF COURSE CAN BE IMMEDIATELY CORRECTED. IT FURTHER INTERACTS WITH THE COMMAND CENTRE, AS THE ABOVE DATA IS BEING PASSED OVER CONSTANTLY TO THE COMMAND CENTRE.

THE **SELF DESTRUCT UNIT** INTERACTS WITH THE SELF DESTRUCT CHARGE, AS IT IS THE MEANS FOR THE DESTRUCTION OF THE SOUND MISSILE. IT ALSO INTERACTS WITH THE CENTRAL PROCESSOR UNIT, AS THIS CONTROLS AND ACTIVATES THE SELF DESTRUCT UNIT. IT FURTHERMORE INTERACTS WITH THE COMMAND CENTRE, WHERE AN ORDER TO SELF DESTRUCT CAN BE ISSUED AT ANY TIME, FOR ANY REASON, OVERRIDING ANY OTHER CENTRAL PROCESSOR UNIT'S ORDERS TO THE SOUND MISSILE, OR THE DRONE, TO UNDERTAKE A DIFFERENT ACTION.

THE **SELF DESTRUCT CHARGE** INTERACTS WITH THE SELF DESTRUCT UNIT, AS IT IS ACTIVATED BY IT. IT ALSO INTERACTS WITH THE TWO CASINGS OF THE SOUND MISSILE, AS THE PRIMARY EXPLOSION TEARS THESE APART AND IGNITES BOTH OF THE SOUND MISSILE'S FUEL TANKS. INTERACTION ALSO OCCURS WITH THE DRONE'S FUEL TANK, WHICH IS IGNITED IN THE EXPLOSION AS NEXT IN SEQUENCE IF MISSILE STILL CARRIED.

THE **TOP SIDE GLASS COVER** INTERACTS WITH THE SOUND MISSILE'S FUSELAGE, AS IT IS MOUNTED ON IT. IT ALSO INTERACTS WITH ITS SUSPENSION UNIT THAT PROVIDES IT WITH AN ABILITY TO REMAIN IN ITS POSITION, BUT STILL GATHER REQUIRED SONIC DATA OF A SUFFICIENT QUALITY. IT INTERACTS WITH THE TOP SIDE COVER SEAL, WHICH SEALS IT FROM THE EXTERIOR AND FROM THE FUSELAGE, SO THAT THE OUTER ENVIRONMENT DOES NOT AFFECT ITS FUNCTIONS OR ANY LINKED FUNCTIONS OF THE SOUND MISSILE. FURTHERMORE, IT INTERACTS WITH THE HEAD GLASS COVER, WHERE IT PASSES THE COLLECTED SONIC DATA TO IT. THE ABOVE COVER ALSO INTERACTS WITH THE CENTRAL PROCESSOR UNIT THAT EVALUATES ALL RECEIVED SONIC DATA FROM THIS COVER.

THE **TOP SIDE COVER SUSPENSION UNIT** INTERACTS WITH THE SOUND MISSILE'S FUSELAGE, AS IT IS MOUNTED ON IT AND LINKS IT WITH THE ABOVE COVER. IT INTERACTS ALSO DIRECTLY WITH THE TOP SIDE GLASS COVER UNIT, PROVIDING IT WITH AN ABILITY TO REMAIN IN ITS POSITION, BUT STILL GATHER REQUIRED SONIC DATA OF A SUFFICIENT QUALITY.

THE **TOP SIDE COVER SEAL** INTERACTS DIRECTLY WITH THE SOUND MISSILE'S FUSELAGE, AS IT IS MOUNTED ON IT AND LINKS IT WITH THE ABOVE COVER. IT INTERACTS ALSO WITH THE TOP SIDE GLASS COVER PROTECTING ITS SIDE EDGES FROM OUTER ENVIRONMENT. THUS, THE

FUNCTIONS OF THE GLASS COVER, AND RELATED FUNCTIONS OF THE SOUND MISSILE REMAIN UNAFFECTED. THE ABOVE SEAL ALSO INTERACTS WITH THE CENTRAL PROCESSOR UNIT, AS IT ENABLES IT TO RECEIVE UNDISTURBED HIGH QUALITY SONIC DATA FROM THE TOP SIDE GLASS COVER.

THE **LOWER SIDE GLASS COVER** INTERACTS WITH THE SOUND MISSILE'S FUSELAGE, AS IT IS MOUNTED ON IT. IT INTERACTS ALSO WITH ITS SUSPENSION UNIT THAT PROVIDES IT WITH AN ABILITY TO REMAIN IN A PARTIALLY FIXED POSITION, BUT STILL GATHER REQUIRED SONIC DATA OF A SUFFICIENT QUALITY. IT INTERACTS WITH THE LOWER SIDE COVER SEAL, WHICH SEALS ITS OUTER EDGES FROM THE EXTERIOR AND THE FUSELAGE, SO THAT THE OUTER ENVIRONMENT DOES NOT AFFECT ITS FUNCTIONS OR ANY OTHER LINKED FUNCTIONS OF THE SOUND MISSILE. FURTHERMORE, IT INTERACTS WITH THE HEAD GLASS COVER, AS IT PASSES THE COLLECTED SONIC DATA TO IT. INTERACTION ALSO OCCURS WITH THE CENTRAL PROCESSOR UNIT THAT EVALUATES ALL RECEIVED SONIC DATA FROM THIS COVER.

THE **LOWER SIDE COVER SUSPENSION UNIT** INTERACTS WITH THE SOUND MISSILE'S FUSELAGE, AS IT IS MOUNTED ON IT AND LINKS IT WITH THE LOWER SIDE GLASS COVER. IT INTERACTS ALSO DIRECTLY WITH THE GLASS COVER UNIT PROVIDING IT WITH AN ABILITY TO REMAIN IN ITS PARTIALLY FIXED POSITION, BUT STILL GATHER THE REQUIRED SONIC DATA OF A SUFFICIENT QUALITY.

THE **LOWER SIDE COVER SEAL** INTERACTS DIRECTLY WITH THE SOUND MISSILE'S FUSELAGE, AS IT IS MOUNTED ON IT AND LINKS IT WITH THE ABOVE COVER. IT INTERACTS ALSO DIRECTLY WITH THE LOWER SIDE GLASS COVER PROTECTING ITS EDGES FROM THE OUTER ENVIRONMENT. THUS, ITS FUNCTIONS, AND OTHER LINKED FUNCTIONS OF THE SOUND MISSILE REMAIN UNAFFECTED. THE ABOVE SEAL ALSO INTERACTS WITH THE CENTRAL PROCESSOR UNIT, AS IT ENABLES IT TO RECEIVE UNDISTURBED HIGH QUALITY SONIC DATA FROM THE TOP SIDE GLASS COVER.

THE **RIGHT WING FLAP** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHICH OPERATES IT THROUGH ITS MOTORISED AND GEARED UNITS. IT ALSO INTERACTS WITH THE DRONE FUSELAGE, AS IT IS AN INTEGRAL PART OF IT AND COPIES ITS OUTER LINES. IT INTERACTS WITH ALL THE OTHER DIRECTIONAL SYSTEM FLAPS AND THE STABILISER, WHERE IT IS ADJUSTED IN CONJUNCTION WITH THE ABOVE MENTIONED. IT FURTHERMORE INTERACTS WITH THE SOUND MISSILE, AS IT IS PARTIALLY THE MEANS FOR THE DRONE TO TAKE UP SUCH A FLIGHT POSITION THAT ENABLES THE SOUND MISSILE TO BE LAUNCHED DIRECTLY TOWARDS THE SELECTED TARGET'S COORDINATES. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE, AS THIS HAS THE ABILITY TO ALTER THE DRONE/SOUND MISSILE'S FLIGHT DIRECTION IN ANY PREFERRED WAY.

THE **LEFT WING FLAP** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHICH OPERATES IT THROUGH ITS MOTORISED AND GEARED UNITS. IT ALSO INTERACTS WITH THE DRONE FUSELAGE, AS IT IS AN INTEGRAL PART OF IT AND COPIES ITS OUTER LINES. IT INTERACTS WITH ALL THE OTHER DIRECTIONAL SYSTEM FLAPS AND THE STABILISER, AS IT IS ADJUSTED IN CONJUNCTION WITH THE ABOVE MENTIONED. FURTHERMORE, IT INTERACTS WITH THE SOUND MISSILE, AS IT IS PARTIALLY THE MEANS FOR THE DRONE TO TAKE UP SUCH A FLIGHT POSITION THAT ENABLES THE SOUND MISSILE TO BE LAUNCHED DIRECTLY TOWARDS THE SELECTED TARGET'S COORDINATES. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE, AS THIS HAS THE ABILITY TO CHANGE THE DRONE/SOUND MISSILE'S FLIGHT DIRECTION IN ANY INTENDED WAY.

THE **REAR RIGHT SIDE FLAP** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHICH OPERATES IT THROUGH ITS MOTORISED AND GEARED UNITS. IT ALSO INTERACTS WITH THE DRONE FUSELAGE, AS IT IS DIRECTLY MOUNTED ON IT AT THE REAR SECTION. IT INTERACTS WITH ALL THE OTHER DIRECTIONAL SYSTEM FLAPS AND THE STABILISER, AS IT IS ADJUSTED IN CONJUNCTION WITH THE ABOVE MENTIONED. FURTHERMORE, IT INTERACTS WITH THE SOUND MISSILE, AS IT IS PARTIALLY THE MEANS FOR THE DRONE TO TAKE UP SUCH A FLIGHT POSITION THAT ENABLES THE SOUND MISSILE TO BE LAUNCHED DIRECTLY TOWARDS THE SELECTED TARGET'S COORDINATES. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE, AS THIS HAS THE ABILITY TO ALTER THE DRONE/SOUND MISSILE'S FLIGHT DIRECTION IN ANY CHOSEN WAY.

THE **REAR LEFT SIDE FLAP** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHICH OPERATES IT THROUGH ITS MOTORISED AND GEARED UNITS. IT ALSO INTERACTS WITH THE DRONE FUSELAGE, AS IT IS DIRECTLY MOUNTED ON IT AT THE REAR SECTION. IT INTERACTS WITH ALL THE OTHER DIRECTIONAL SYSTEM FLAPS AND THE STABILISER, AS IT IS ADJUSTED IN CONJUNCTION WITH THE ABOVE MENTIONED. FURTHERMORE, IT INTERACTS WITH THE SOUND MISSILE, AS IT IS PARTIALLY THE MEANS FOR THE DRONE TO TAKE UP A FLIGHT POSITION THAT ENABLES THE SOUND MISSILE TO BE LAUNCHED DIRECTLY TOWARDS THE SELECTED TARGET'S COORDINATES. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE, AS THIS HAS THE ABILITY TO CHANGE THE DRONE/SOUND MISSILE'S FLIGHT DIRECTION IN ANY DESIRED WAY.

THE **STABILISER** INTERACTS WITH THE DRONE FUSELAGE, AS IT IS AN INTEGRAL PART OF ITS CONSTRUCTION. IT ALSO INTERACTS WITH THE RUDDER, PROVIDING IT WITH THE CAPABILITY TO TURN THE DRONE/SOUND MISSILE SIDEWAYS IN BOTH DIRECTIONS. IT ALSO PARTIALLY INTERACTS WITH ALL THE OTHER DIRECTIONAL SYSTEM FLAPS. FURTHERMORE, IT INTERACTS WITH THE SOUND MISSILE, AS IT PROVIDES THE DRONE WITH THE ABILITY TO TAKE UP SUCH A FLIGHT POSITION THAT ENABLES THE SOUND MISSILE TO BE LAUNCHED DIRECTLY IN-LINE WITH THE SELECTED TARGET'S COORDINATES.

THE **RUDDER** INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHICH OPERATES IT THROUGH ITS MOTORISED AND GEARED UNITS. IT ALSO INTERACTS WITH THE DRONE FUSELAGE, AS IT IS MOUNTED ON IT, AT THE REAR TOP SECTION, IN THE STABILISER. IT INTERACTS WITH ALL THE DIRECTIONAL SYSTEM FLAPS AND THE STABILISER, AS IT IS ADJUSTED IN CONJUNCTION WITH THE ABOVE MENTIONED. FURTHERMORE, IT INTERACTS WITH THE SOUND MISSILE, AS IT PARTIALLY ENABLES THE DRONE TO TAKE UP SUCH A FLIGHT POSITION AS TO ALLOW THE SOUND MISSILE TO BE LAUNCHED DIRECTLY IN-LINE WITH THE SELECTED TARGET'S COORDINATES. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE, AS THIS HAS THE ABILITY TO CHANGE THE DRONE/SOUND MISSILE'S FLIGHT DIRECTION IN ANY INTENDED WAY.

THE **PARACHUTE** INTERACTS WITH THE DRONE/SOUND MISSILE, ENABLING THE COMPLETE DRONE/SOUND MISSILE UNIT TO LAND SAFELY, AND BE REPAIRED, IN AN EVENT OF SYSTEM FAILURE. THUS, PROVIDING THE COMPLETE UNIT WITH AN EXTENDED LIFE SPAN, AND AVOIDING FINANCIAL LOSS. IT FURTHER INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHICH CONTROLS IT. IT INTERACTS WITH THE PARACHUTE COMPARTMENT, AS IT IS THE MEANS OF STORAGE FOR THE PARACHUTE PRIOR TO ITS USE. FURTHERMORE, IT INTERACTS WITH ITS EXPLOSIVE THRUST CHARGE, AS THIS IS THE ENABLING PART FOR AN EJECTION PROCESS TO BE COMPLETED IN A SHORT TIME SPAN. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE, AS IT POSSESSES THE ABILITY TO ACTIVATE THE COMPLETE SYSTEM.

THE **PARACHUTE COMPARTMENT** INTERACTS WITH THE DRONE FUSELAGE, AS IT IS AN INTEGRAL PART OF ITS STRUCTURE. IT INTERACTS WITH THE CENTRAL PROCESSOR UNIT THAT CONTROLS THE PROCESS, BY OPENING THE TOP COVER, PRIOR TO THE ACTUAL PARACHUTE EJECTION. IT ALSO INTERACTS WITH THE PARACHUTE, AS THIS IS STORED IN THE ABOVE COMPARTMENT. INTERACTION ALSO OCCURS WITH THE PARACHUTE EXPLOSIVE THRUST CHARGE, FOR THE SAME REASON. FURTHERMORE, IT INTERACTS WITH THE COMMAND CENTRE, WHICH POSSESSES THE ABILITY TO ACTIVATE THE EJECTION PROCESS.

THE **PARACHUTE EXPLOSIVE THRUST CHARGE** INTERACTS WITH THE DRONE/SOUND MISSILE, ENABLING THE COMPLETE UNIT TO LAND SAFELY, AND BE REPAIRED IN CASE OF ANY SYSTEM FAILURE. THIS AVOIDS THE LIKELIHOOD OF FINANCIAL LOSS IN RESPECT OF THE COMPLEX AND ALLOWS THE COMPLETE UNIT TO BE REUSED. IT FURTHER INTERACTS WITH THE CENTRAL PROCESSOR UNIT, WHICH OPERATES IT. INTERACTION ALSO OCCURS WITH THE PARACHUTE COMPARTMENT, AS THIS IS WHERE THE CHARGE IS STORED. IT ALSO INTERACTS WITH THE PARACHUTE AND THE COMPARTMENT THAT ARE THE ENABLING PARTS FOR AN IDEAL EJECTION PROCESS TO BE COMPLETED IN A SHORTEST POSSIBLE TIME SPAN. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE THAT HAS THE ABILITY TO ACTIVATE THE EJECTION PROCESS.

THE **DRONE THRUST TURBINE ENGINE**; IT DOES NOT SPECIFICALLY INTERACT WITH THE DRONE'S FUEL TANK, NEVERTHELESS THIS FUEL TANK PROVIDES THE THRUST ENGINE WITH THE AMOUNT OF FUEL THAT IT REQUIRES FOR ITS OPERATIONS. IT INTERACTS WITH THE DRONE/SOUND MISSILE, PROVIDING IT WITH AN ABILITY TO FLY AND ACHIEVE THE REQUIRED UNIT VELOCITY. IT FURTHER INTERACTS WITH THE CENTRAL PROCESSOR UNIT THAT CONTROLS AND DIRECTS ITS OPERATIONS. IT INTERACTS WITH THE DRONE'S FUSELAGE, AS IT IS MOUNTED WITHIN IT. INTERACTION ALSO OCCURS WITH THE COMMAND CENTRE, WHICH HAS THE CAPABILITY TO OVERRIDE THE CENTRAL PROCESSOR UNIT AND DIRECT THE OPERATIONS OF THE DRONE'S THRUST ENGINE, ITSELF.

THE **DRONE THRUST ENGINE EXHAUST** INTERACTS SOLELY WITH THE DRONE THRUST TURBINE ENGINE. IT PROVIDES THE ENGINE WITH GUIDED EXIT OF THE BURNED OUT FUEL, THUS PROVIDING THE DIRECTED THRUST EXIT.

THE **DRONE FUEL TANK** INTERACTS WITH THE DRONE FUSELAGE, AS IT IS ACTUALLY CREATED BY ITS STRUCTURE. ALTHOUGH, IT DOES NOT INTERACT IN ANY PARTICULAR MANNER WITH THE DRONE THRUST TURBINE ENGINE, IT IS THE MEANS OF FUEL STORAGE FOR THIS ENGINE. INTERACTION ALSO OCCURS WITH THE FEATURES OF THE SELF DESTRUCT UNIT, AS THE INDIVIDUAL EXPLOSIVE CHARGES ARE SET TO DETONATE ALL THE INTERNAL FUEL TANKS AND THEREBY ENSURE COMPLETE DESTRUCTION OF THE DRONE/SOUND MISSILE.

ALTERNATIVES & SUBSTITUTIONS:

THE **COMMAND CENTRE** IS AN UNQUESTIONABLY ESSENTIAL PART OF THE INVENTION. IT CANNOT BE REPLACED EFFECTIVELY WITH ANY OTHER CONTROLLING FEATURE. THE HUMAN FACTOR OF FINAL CONTROL OVER THE SOUND MISSILE DEFENCE SYSTEM IS FELT ABSOLUTELY NECESSARY, EVEN THOUGH THE COMPLETE DEFENCE SYSTEM IS FULLY AUTOMATED.

THE **DEFENCE PERIMETER** IS AN ESSENTIAL FEATURE OF THE INVENTION, AS IT IS THE BASIS DESIGNED TO PROVIDE THE DEFENCE SYSTEM WITH AN ABILITY TO REACT MORE RAPIDLY TO ANY POTENTIAL THREATS. EVEN THOUGH IT IS DESIGNED AS A FIXED PERIMETER, IT CAN BE EXPANDED RAPIDLY WHENEVER FELT APPROPRIATE. IT IS A KEY FEATURE OF THE INVENTION THAT CANNOT BE SUBSTITUTED.

THE **DRONE** IS AN ESSENTIAL PART OF THE INVENTION. IT PROVIDES THE INDIVIDUAL SOUND MISSILES WITH A RAPID RESPONSE CAPABILITY AND ALLOWS THEM TO COLLECT CRUCIAL SONIC DATA OVER A LONGER RANGE. AS SUCH, IT CANNOT BE SUBSTITUTED BY ANY FEATURE THAT WOULD PROVIDE THE INVENTION WITH BETTER RESULTS. NEVERTHELESS, IT CAN BE AUGMENTED, OR SUPPLEMENTED, BY SOUND MISSILE BATTERIES BASED AT SEA, ON LAND, AND

INDIVIDUAL SOUND MISSILES MOUNTED ON STRIKE JETS, AND VARIOUS MOBILE PLATFORMS.

THE **SOUND MISSILE** IS THE ENABLING AND CRITICALLY ESSENTIAL PART OF THE INVENTION. PRACTICALLY ANY KIND OF A MISSILE MAY BE USED, INSTEAD OF THE SOUND MISSILES, TOGETHER WITH THE DRONES THAT FORM IN EFFECT THE MISSILE CARRIER AND LAUNCH PLATFORMS. HOWEVER, IN RESPECT OF THIS INVENTION, THIS FEATURE MUST NOT BE SUBSTITUTED.

THE **MISSILE LAUNCH TUBE** IS AN ESSENTIAL FEATURE OF THE INVENTION. THE SOUND MISSILE CAN BE FIXED IN ALTERNATIVE POSITIONS, AND WITH DIFFERING KINDS OF FIXATION MECHANISMS, BUT IT IS FELT THAT THE LAUNCH TUBE ALIGNED WITH THE CENTRAL AXIS OF THE DRONE IS THE MOST EFFECTIVE SOLUTION FOR THE STORAGE AND SUBSEQUENT LAUNCH OF THE MISSILE.

THE **MISSILE LOCKING MECHANISM;** THE PROPOSED VERSION IS NOT AN ESSENTIAL PART OF THE INVENTION. VARIOUS OTHER FORMS OF MECHANISMS COULD BE USED, AS WELL AS ALTERNATIVE DESIGNS AND MATERIALS. THIS DESIGN OF THE LOCKING SYSTEM FOR THE MISSILE HAS BEEN CHOSEN SOLELY FOR ITS SIMPLICITY AND RELIABILITY. THE ALTERNATIVE DESIGNS ARE CONSIDERED TO BE IRRELEVANT TO THE FUNCTIONALITY OF THE INVENTION.

THE **MISSILE FLAP RETRACTION GROOVES** ARE NOT AN ESSENTIAL PART OF THE INVENTION. THE FLAP RETRACTION GROOVES COULD BE LEFT OUT OF THE DESIGN, BUT THE CONSTRUCTION OF SMALLER GROOVES PROVIDES THE FUEL TANK OF THE DRONE WITH AN ADDITIONAL AMOUNT OF FUEL CAPACITY. ALTERNATIVE DESIGN VARIATIONS SUCH AS SINGLE ENCASED BALL BEARINGS LOCATED AROUND THE SOUND MISSILE MAY BE USED INSTEAD. DIFFERING FLAP DESIGNS NEED NOT REQUIRE THE FLAPS TO BE RETRACTED IN THIS MANNER. THE FLAPS CAN ALSO BE TOTALLY RETRACTED INTO THE MISSILE FUSELAGE. DESPITE ALL THE DESIGN SUBSTITUTIONS AVAILABLE, IT IS FELT THAT THE CHOSEN DESIGN AND METHOD IS THE MOST SUITABLE FOR THIS INVENTION.

THE **MISSILE FRONT DIRECTIONAL FLAPS** ARE AN ESSENTIAL PART OF THE INVENTION, AS SOME FORM OF FRONT DIRECTIONAL FLAPS ARE ABSOLUTELY NECESSARY TO PROVIDE THE SOUND MISSILE WITH THE MAXIMUM ABILITY TO MANOEUVRE WHILE ON AN APPROACH TOWARDS THE SELECTED TARGET. MANY ALTERNATIVE DESIGNS OF FRONT MISSILE FLAPS MAY BE USED IN ADDITION TO VARIOUS MATERIALS. THE PROPOSED DESIGN IS NOT ESSENTIAL IN RESPECT OF A STANDARD MISSILE. NEVERTHELESS, IN CASE OF THE FINAL DESIGN OF THE SOUND MISSILE DIRECTIONAL FLAPS, THAT IS TO BE FILED AT A LATER STAGE, THE PROPOSED DESIGN IS A CRITICAL ISSUE.

THE **MISSILE REAR DIRECTIONAL FLAPS** ARE AN ESSENTIAL FEATURE OF THE INVENTION, AS SOME FORM OF REAR DIRECTIONAL FLAPS ARE

ABSOLUTELY CRUCIAL TO PROVIDE THE SOUND MISSILE WITH THE MAXIMUM ABILITY TO MANOEUVRE WHILE ON AN APPROACH TOWARDS THE SELECTED TARGET. A NUMBER OF REAR MISSILE FLAPS DESIGN VARIATIONS MAY BE USED IN ADDITION TO VARIOUS MATERIALS. THE PROPOSED DESIGN IS NOT ESSENTIAL IN RESPECT OF A STANDARD MISSILE. HOWEVER, IN CASE OF THE FINAL DESIGN OF THE SOUND MISSILE DIRECTIONAL FLAPS THAT IS TO BE FILED AT A LATER STAGE THE PROPOSED DESIGN BECOMES A CRITICAL ISSUE.

THE **MISSILE THRUST PROPULSION UNIT** IS AN ESSENTIAL PART OF THE INVENTION. SOME FORM OF A PROPULSION UNIT THAT PROVIDES SUFFICIENT THRUST AND ADEQUATE VELOCITY IS REQUIRED TO INTERCEPT THE SELECTED TARGET AS RAPIDLY AS POSSIBLE. DIFFERENT KINDS OF MISSILE PROPULSION UNITS ARE AVAILABLE AND COULD BE USED IN THE DESIGN. HOWEVER, THE EFFICIENCY OF THE PROPULSION UNIT REMAINS THE KEY AND DECISIVE ISSUE.

THE NEW STRUCTURAL FEATURES INCORPORATED IN THE DESIGN OF THE SOUND MISSILE, (IN THE SECTIONS RELATING TO ITS PROPULSION UNIT), MADE BY THE INVENTOR, ARE NOT TO BE CONSIDERED AS ESSENTIAL PARTS OF THIS INVENTION AT PRESENT. HOWEVER, IN RESPECT OF THE NEW PATENT REQUEST THAT WILL BE FILED, AT A LATER STAGE, THESE NEW FEATURES OF THE PROPULSION UNIT WILL BECOME CRITICAL TO THE SOUND MISSILE FINAL DESIGN. A NEW PATENT REQUEST IN RESPECT OF THE ABOVE WILL BE FILED AT A LATER STAGE AND INCLUDE PRECISE TECHNICAL SPECIFICATIONS.

THE **MISSILE THRUST ENGINE EXHAUST** IS AN ESSENTIAL PART OF THE INVENTION, AS A FORM OF A DIRECTED THRUST EXIT IS A BASIC PHYSICAL REQUIREMENT. NEVERTHELESS, THE EXHAUST MAY BE DIFFERENTLY SHAPED, AND VARIOUS MATERIALS MAY BE USED FOR ITS MANUFACTURE. IN ADDITION, DEPENDING ON THE TECHNICAL REQUIREMENTS, SUPPLEMENTARY MECHANICAL PARTS MAY ALSO BE USED TO GAIN AN EXHAUST WITH AN ADJUSTABLE DIAMETER. AN EXHAUST WITH DIRECTED THRUST CAPABILITY CAN ALSO BE USED AS A REPLACEMENT.

THE **MISSILE SOLID FUEL TANK**; THE INVENTION AT THIS STAGE INCORPORATES A SOLID FUEL THRUST PROPULSION UNIT WITH A SECONDARY LIQUID FUEL TANK INCLUDED FOR OTHER PURPOSES. THE SOLID FUEL TANK IS AN ESSENTIAL PART OF IT. IT CAN BE SUBSTITUTED ONLY BY ANOTHER FORM OR DESIGN OF FUEL TANK. HOWEVER, A NUMBER OF ALTERNATIVE MATERIALS MAY BE USED FOR ITS MANUFACTURE AND ITS SHAPE CAN ALSO BE ALTERED.

THE **MISSILE LIQUID FUEL TANK** IS NOT AN ESSENTIAL PART OF THIS INVENTION. HOWEVER, IT WILL BECOME ABSOLUTELY CRUCIAL IN THE FINAL DESIGN OF THE PROPULSION UNIT FOR THE SOUND MISSILE THAT WILL BE FILED AT A LATER STAGE. IN THE EVENT, THAT A STANDARD TYPE OF SOLID FUEL MISSILE PROPULSION UNIT IS USED, THIS FEATURE MAY BE LEFT OUT OF THE DESIGN COMPLETELY. IN

ADDITION, ALTERNATIVE MATERIALS MAY BE USED FOR ITS MANUFACTURE. THE TUBULAR SHAPE CAN ALSO BE ALTERED.

THE **MISSILE GLASS HEAD** IS ONE OF THE PRIMARY ENABLING PARTS OF THE INVENTION. THERE ARE ALTERNATIVE MATERIALS THAT THE MISSILE HEAD CAN BE MANUFACTURED FROM, SUCH AS A WIDE RANGE OF HEAT RESISTANT METALS. HOWEVER, THE PROPOSED THIN, RIGID, HEAT RESISTANT GLASS IS THE MOST APPROPRIATE MATERIAL TO ACHIEVE BEST RESULTS IN RESPECT OF ABILITY TO COLLECT SONIC DATA AND IMAGING DATA OF THE SAME QUALITY. THE DESIGN OF INNER VACUUM IN THE GLASS HEAD CAN BE ABANDONED AND THE INNER SPACE CAN BE ALTERNATIVELY FILLED WITH AIR.

NEVERTHELESS, THE VACUUM IS THE MOST EFFECTIVE PROTECTION FOR THE SENSITIVE TECHNOLOGY LOCATED IN THE GLASS HEAD. WHERE A NON-TRANSPARENT MATERIAL WOULD BE USED FOR THE CONSTRUCTION OF THE HEAD, AN ALTERNATIVE LOCATION ON THE SOUND MISSILE WOULD HAVE TO BE SOUGHT FOR AT LEAST SOME PARTS OF THE IMAGING TECHNOLOGY. THIS TECHNICAL SOLUTION IS NOT CONSIDERED TO BE SUFFICIENTLY EFFECTIVE.

THE **MISSILE GLASS HEAD SUSPENSION UNIT** IS AN ESSENTIAL PART OF THE INVENTION. IF THE GLASS HEAD WAS FIXED TO THE REST OF THE SOUND MISSILE FUSELAGE WITH NO ROOM TO VIBRATE IN A CONTROLLED MANNER, THE RESULTING SONIC VIBRATIONS COULD BE DISTORTED IN A SEVERE MANNER. THE SONIC RECOGNITION SYSTEM MAY MISINTERPRET SOME VIBRATIONS AND THEREBY WRONGLY IDENTIFY THE OBJECT. SEVERAL TECHNICAL SOLUTIONS AND DESIGNS MAY BE USED FOR THE SUSPENSION OF THE GLASS HEAD WITHIN THE SOUND MISSILE FUSELAGE. IN THE OPINION OF THE INVENTOR THE VARIOUS DESIGNS ARE IN FACT IRRELEVANT AS ONLY SUCH FINAL DESIGNS FOR THIS PART THAT WILL PROVIDE THE MOST EFFECTIVE RESULTS AFTER TESTING WOULD COME INTO CONSIDERATION.

THE **MISSILE GLASS HEAD SEAL** IS NOT AN ESSENTIAL PART OF THE INVENTION. IN A CASE WHERE NO SUSPENSION IS USED FOR THE LINK BETWEEN THE SOUND MISSILE HEAD AND THE MISSILE FUSELAGE, THIS FORM OF A SEAL IS REDUNDANT. OTHER SOLUTIONS COULD BE SOUGHT AND THE SEAL MAY BE REPLACED WITH A SEALANT MATERIAL THAT CREATES A FIRM FIXED BOND OR A PARTIALLY FIXED BOND.

THE **CENTRAL PROCESSOR UNIT** IS ABSOLUTELY ESSENTIAL TO PROVIDE THE SOUND MISSILE WITH AN ARTIFICIAL FORM OF INTELLIGENCE IN RESPECT OF THE TECHNOLOGY STANDARD CHOSEN FOR THIS INVENTION AND THE COMPLETE DEFENCE SYSTEM. THE PROCESSOR UNIT MAY VARY DEPENDING ON THE CURRENT PROCESSOR TECHNOLOGY AVAILABLE FOR SUCH DEVICES. HOWEVER, A CENTRAL PROCESSOR UNIT IS CLEARLY ESSENTIAL. THE INTEGRAL PROCESSOR STRUCTURE IS OF COURSE ALSO A MATTER OF AVAILABILITY, AS WELL AS THE ACTUAL EFFICIENCY OF THE INDIVIDUAL COMPONENT PARTS.

THE **SONIC VIBRATIONS ANALYSIS UNIT** IS AN ESSENTIAL PART OF THE INVENTION. THE SOUND WAVES RESULTING IN SONIC VIBRATIONS HAVE TO BE TRANSFERRED INTO DIGITAL PATTERNS AND RESULT IN A GRAPHICAL FORM. THEREBY, ONLY A DEVICE THAT IS EQUALLY CAPABLE OF PRODUCING THE SAME QUALITY OF DATA RESULTING IN A SONIC FINGERPRINT, CAN BE A SUBSTITUTE FOR THE PROPOSED DESIGN OF THE INVENTION.

THE **SONIC DATABASE UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. FOR THE PURPOSE OF PROVIDING A COMPARISON FOR INCOMING DATA, THE DATABASE MUST BE INCLUDED. IT MUST ALSO CONTAIN THE MAXIMUM POSSIBLE AMOUNT OF COMPARISON DATA, WHICH HAS TO BE FED INTO THE DATABASE. IT IS THEREFORE ABSOLUTELY CRUCIAL THAT A PART FULFILLING THIS FUNCTION IS FITTED TO THE SYSTEM.

THE **DIGITAL IMAGING UNIT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. THEORETICALLY, THIS UNIT MAY BE REPLACED BY OTHER FORMS OF RECOGNISANCE TECHNOLOGY, FOR EXAMPLE RADAR. HOWEVER, IT IS FELT THAT FOR THE PURPOSE OF THIS INVENTION AND ITS NATURE, SUCH SUBSTITUTIONS WOULD MAKE THE SOUND MISSILE AND THE COMPLETE SYSTEM MUCH MORE VULNERABLE TO DETECTION. NEVERTHELESS, IT MUST BE STATED THAT THE ABOVE DEVICE CAN BE REPLACED BY SUCH SYSTEMS, EVEN THOUGH THE RESULTING DESIGN WOULD BRING FEWER REWARDS.

THE **DIGITAL IMAGING DATABASE UNIT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION EITHER, AS WITH REGARD TO THE ABOVE ARTICLE, IT IS CLEAR THAT IT MAY BE LEFT OUT OF THE FINAL DESIGN COMPLETELY. HOWEVER, IT IS FELT THAT FOR THE PURPOSE AND NATURE OF THIS INVENTION, THE SUBSTITUTIONS OR CHANGES IN THE FINAL DESIGN WOULD MAKE THE SOUND MISSILE AND THE COMPLETE DEFENCE SYSTEM MORE VULNERABLE TO DETECTION. NEVERTHELESS, IT MUST BE SAID THAT THE ABOVE DEVICE CAN BE REPLACED BY SUCH SYSTEMS, EVEN THOUGH THE RESULTING DESIGN WOULD DEFINITELY BRING FEWER REWARDS.

THE **DIGITAL IMAGING ANALYSIS UNIT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION, AS WITH REGARD TO THE ABOVE TWO ARTICLES, IT IS CLEAR THAT IT MAY ALSO BE LEFT OUT OF THE FINAL DESIGN COMPLETELY. HOWEVER, IT IS FELT THAT FOR THE PURPOSE AND NATURE OF THIS INVENTION, THE SUBSTITUTIONS OR CHANGES IN THE FINAL DESIGN WOULD MAKE THE SOUND MISSILE AND THE COMPLETE DEFENCE SYSTEM ONLY MORE VULNERABLE TO DETECTION. HOWEVER, IT MUST BE QUOTED THAT THE ABOVE DEVICE CAN BE REPLACED BY THE ALTERNATIVE SYSTEMS, EVEN THOUGH THE RESULTING DESIGN WOULD ASSUREDLY BRING FEWER REWARDS.

THE **OPTICAL UNIT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION, AS IT IS AN INTEGRAL PART OF THE DIGITAL IMAGING

RECOGNISANCE SUBSYSTEM. IT MAY ALSO BE LEFT OUT OF THE FINAL DESIGN COMPLETELY. HOWEVER, IT IS FELT THAT FOR THE PURPOSE AND NATURE OF THIS INVENTION, ANY OF THE POSSIBLE SUBSTITUTIONS OR DESIGN CHANGES WOULD MAKE THE SOUND MISSILE AND THE PROPOSED FORM OF THE DEFENCE SYSTEM MORE VULNERABLE TO DETECTION. HOWEVER, IT MUST BE STIPULATED THAT THE ABOVE DEVICE CAN BE REPLACED BY THE MENTIONED SYSTEMS, EVEN THOUGH THE RESULTING DESIGN WOULD MOST CERTAINLY BRING LESSER REWARDS.

THE **SATELLITE COMMUNICATIONS RECEPTION UNIT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. THE DEFENCE SYSTEM IN ITS COMPLEXITY NEEDS COMMUNICATION WITH THE EARLY WARNING SATELLITE SYSTEM ONLY FOR THE PURPOSE OF ACTING AGAINST WEAPONS, SUCH AS INTERCONTINENTAL MISSILES WITH MASS DESTRUCTION CAPABILITY. THE PROPOSED DEFENCE SYSTEM CAN REACT PROMPTLY AGAINST ALMOST ANY OTHER FORM OF WEAPONS WITHOUT ANY NEED OF ASSISTANCE. AS SUCH, THE ABOVE UNIT CAN BE LEFT OUT OF THE DESIGN COMPLETELY, OR REPLACED BY ALMOST ANY OTHER FORM OF SYSTEM.

HOWEVER, IT IS FELT THAT FOR THE PURPOSE OF BROADENING THE EFFECTS, COVERAGE, AND STRIKE CAPABILITY OF THE DEFENCE SYSTEM, THE SATELLITE COMMUNICATIONS ARE CERTAINLY A PLUS FOR THE FINAL DESIGN OF THE DEFENCE SYSTEM COMPLEX. YET, IT MUST BE ITERATED THAT IF THE ABOVE DEVICE WAS REPLACED BY OTHER SYSTEMS, OR LEFT OUT OF THE DESIGN COMPLETELY, THE RESULT WOULD BRING VERY LIMITED REWARDS.

THE **GYROSCOPE UNIT** IS AN ESSENTIAL PART OF THE INVENTION. IT IS CONSIDERED TO BE THE MOST EFFECTIVE AND RELIABLE MECHANICAL DEVICE AVAILABLE FOR THIS PURPOSE. WHEN LINKED WITH THE CENTRAL PROCESSOR UNIT, IN A HIGH TECH ENVIRONMENT, IT PROVIDES THE DRONE, ALTERNATIVELY THE SOUND MISSILE WITH AN INSTANT CONTROL OVER ITS FLIGHT PATTERNS. IT ALLOWS THE MISSILE GUIDANCE SYSTEM TO TAKE IMMEDIATE ACTION, IN RESPECT OF FLIGHT AXIS IRREGULARITIES. SUBSTITUTIONS OF ANY OTHER SORT THAT ARE POSSIBLE, DO NOT MATCH THE QUALITY OR EFFECTIVENESS OF THIS COMBINATION.

THE **GLOBAL POSITIONING UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. IT PROVIDES THE DRONES CARRYING THE SOUND MISSILES WITH A DEVICE THAT IN TURN ENABLES THE COMMAND CENTRE TO SURVEY THE PRECISE POSITION OF EACH DRONE WITHIN THE DEFENCE PERIMETER. THERE ARE NO ALTERNATIVE DEVICES AVAILABLE THAT WOULD PROVIDE BETTER RESULTS IN THIS SENSE.

THE **CENTRAL COMMAND RECEIVER UNIT** IS CONSIDERED TO BE AN ABSOLUTELY ESSENTIAL FEATURE OF THE INVENTION. IT IS FELT, THAT AN ORDER RECEIVED FROM THE COMMAND CENTRE TO LAUNCH AND DESTROY A SELECTED TARGET SHOULD NOT BE COMMUNICATED

VIA STANDARD COMMUNICATION CHANNEL, USED BY THE INTEGRAL SYSTEM OF THE SOUND MISSILE. VERIFICATIONS OF THIS SOLE PURPOSE CHANNEL SHOULD BE UNDERTAKEN ON A REGULAR BASIS, BUT THE SYSTEM SHOULD NOT BE USED FOR ANY OTHER PURPOSE. IT IS BELIEVED THAT SUCH SEPARATION OF THE COMMUNICATIONS CHANNELS WILL PROVIDE THE MOST SECURE PROCESS.

THE **CENTRAL COMMUNICATIONS UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. IT IS FELT, THAT STANDARD COMMUNICATIONS SHOULD BE SEPARATED FROM THE COMMUNICATION OF A SPECIFIC ORDER TO LAUNCH AND DESTROY A SELECTED TARGET THAT WAS ISSUED BY THE COMMAND CENTRE. IT IS BELIEVED TO BE A CRUCIAL AND BENEFICIAL FACTOR THAT A STANDARD COMMUNICATIONS CHANNEL IS INCLUDED IN THE DESIGN, TO ENABLE THE DIFFERENT FORMS OF COMMUNICATIONS TO WORK ALONGSIDE OF EACH OTHER INDEPENDENTLY AND NOT TO INTERFERE ONE ANOTHER.

THE **INTER-DRONE COMMUNICATIONS UNIT** IS AN ESSENTIAL PART OF THE INVENTION. WITH REGARD TO THE ABOVE MENTIONED COMMUNICATIONS LAY OUT, THE COMMUNICATIONS BETWEEN THE DRONES/SOUND MISSILES SHOULD NOT BE PART OF ANY OF THE OTHER THREE AVAILABLE CHANNELS. ONCE THE TARGET IS SELECTED, THE COMMUNICATIONS BETWEEN THE DRONES, (PRIOR TO THE MISSILES BEING LAUNCHED), AND ALL SUBSEQUENT COMMUNICATIONS BETWEEN THE SOUND MISSILES AND INTERNAL SYSTEMS RESOLUTIONS IN RESPECT OF WHICH SOUND MISSILE WILL TAKE WHICH ATTACK POSITION ARE ABSOLUTELY CRUCIAL. NO RISK OF INTERFERENCE FROM OTHER COMMUNICATION CHANNELS CAN BE ALLOWED, AS EVERYTHING WILL NOW MOVE TOO RAPIDLY FOR ANY CONSIDERABLE CHANGES TO TAKE PLACE IN TIME.

THE **FLIGHT LEVEL ANALYSIS UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. THE SYSTEM MUST INCLUDE A DEVICE WITH THE ABILITY OF RAPID SELF-CORRECTION IN RESPECT OF THE ABOVE FLIGHT CHARACTERISTICS WITHOUT THE NEED FOR EXTERNAL ASSISTANCE. THE ABOVE UNIT COULD BE LEFT OUT OF THE DESIGN AND REPLACED BY OTHER SYSTEMS THAT PROVIDE THE SAME DATA. THE DATA COULD BE ALTERNATIVELY PASSED OVER TO THE DRONES FROM THE COMMAND CENTRE, BUT SUCH ALTERNATIVE WOULD BRING NO REWARDS.

IT IS CONSIDERED A NECESSITY THAT THE DRONES/SOUND MISSILES ARE ABLE TO PROVIDE THIS DATA INDIVIDUALLY BY MEANS OF THE INTERNALLY MOUNTED TECHNOLOGY, IF ONLY FOR THE SOLE REASON OF COMPARISON BEING AVAILABLE FOR THE COMMAND CENTRE. IT MUST BE NOTED THAT THE ABOVE DEVICE CAN BE REPLACED, OR LEFT OUT OF THE DESIGN ALL TOGETHER. THE ALTERNATIVES WOULD NOT ENHANCE THE SYSTEM, BUT DETRACT FROM IT.

THE **FORCE ANALYSIS UNIT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. THUS, IT COULD BE LEFT OUT OF THE FINAL DRONE FUSELAGE STRUCTURAL DESIGN ALL TOGETHER. NEVERTHELESS, IT IS BELIEVED THAT THE ABOVE DEVICE WILL CERTAINLY ASSIST, SUBSTANTIALLY, THE OTHER FLIGHT DATA GATHERING DEVICES IN DETECTING IMMEDIATE CHANGES OF VERTICAL FORCES IN LINE WITH THE CENTRE OF GRAVITY THAT SUBSTANTIALLY EFFECT THE STABILITY OF THE DRONE/SOUND MISSILE. IT IS NOTED THAT THE FUNCTIONS ARE DULY DOUBLED BY OTHER SYSTEMS INCLUDED. HOWEVER, THE ABILITY OF THE UNIT SYSTEM TO GATHER THE FORCE VALUES IN LINE WITH THE CENTRE OF GRAVITY IN RESPECT OF THE DRONE'S FUSELAGE IS CERTAINLY CONSIDERED TO BE BENEFICIAL.

THE **DIRECTIONAL ANALYSIS UNIT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. THE, IT COULD BE LEFT OUT OF THE DRONE FUSELAGE STRUCTURAL DESIGN ALL TOGETHER, SAME AS THE ABOVE MENTIONED FEATURE. HOWEVER, IT IS CONSIDERED THAT THIS DEVICE WILL ASSIST SUBSTANTIALLY THE OTHER FLIGHT DATA GATHERING DEVICES IN DETECTING IMMEDIATE FLIGHT DIRECTION CHANGES WITH REGARD TO THE DEFENCE PERIMETER. THEREFORE, IT PROVIDES ADDITIONAL EFFECTIVENESS IN RAPID ALIGNMENT OF THE DRONE/SOUND MISSILE. THE FUNCTIONS ARE IN FACT ALREADY SUPPLEMENTED BY OTHER DATA GATHERING DEVICES INCLUDED IN THE LAY OUT, SUCH AS FOR EXAMPLE BY THE GPS DEVICE. YET, THE DUAL ABILITY OF THE SYSTEM TO GATHER THE DIRECTIONAL DATA BY A DEVICE USED ONLY FOR THIS PURPOSE IS CONSIDERED TO BE ADVANTAGEOUS.

THE **ANGLE-TO-TARGET ANALYSIS UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. THE GUIDANCE SYSTEM OF THE SOUND MISSILE MUST POSSESS THE ABILITY FOR IMMEDIATE SELF-CORRECTION IN RESPECT OF THE ACTUAL ANGLE TO THE TARGET THAT THE MISSILE IS CURRENTLY TRACKING. THE ABOVE UNIT COULD BE SUBSTITUTED BY OTHER DEVICES OF SIMILAR NATURE ACTING IN PRINCIPLE ONLY ON OTHER PHYSICAL MEANS. WHEN IN FLIGHT TOWARDS THE SELECTED TARGET, IT IS NOT BENEFICIAL TO RELY ON SUCH DATA BEING FOR EXAMPLE TRANSMITTED FROM THE COMMAND CENTRE TO THE SOUND MISSILE.

VALUABLE TIME WOULD BE LOST AND THE RESULT MAY BE THAT THE TARGET WOULD NOT BE DESTROYED IN AN IDEAL DISTANCE FROM THE DEFENDED TERRITORY. IT IS FELT CRUCIAL THAT THE DRONES/SOUND MISSILES GAIN THIS DATA INDIVIDUALLY BY MEANS OF THE INTERNALLY MOUNTED TECHNOLOGY. IT MUST BE NOTED THAT THE ABOVE DEVICE CAN BE REPLACED WITH OTHER DEVICES PROVIDING THE SAME EFFECT, YET SUCH A DESIGN ALTERATION IS NOT CONSIDERED TO BE BENEFICIAL.

THE **DISTANCE-TO-TARGET ANALYSIS UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. THE GUIDANCE SYSTEM OF THE SOUND MISSILE MUST BE ABLE TO ASSESS THE DISTANCE TO THE TARGET AT

ALL TIMES. THE ABOVE UNIT MAY BE SUBSTITUTED BY OTHER DEVICES ACTING IN PRINCIPLE ON OTHER PHYSICAL MEANS. WHEN IN FLIGHT TOWARDS THE SELECTED TARGET, IT IS NOT BENEFICIAL FOR THE MISSILE TO RELY ON THIS SORT OF DATA BEING GATHERED EXTERNALLY BY OTHER SOURCE AND THEN TRANSMITTED FROM THE COMMAND CENTRE OR ELSEWHERE TO THE SOUND MISSILE.

TIME WOULD BE LOST IN THE PROCESS AND THE THREE LAUNCHED SOUND MISSILES POSSESS THE CAPABILITY OF COMPARISON AS THE DATA IS BEING GATHERED BY ALL THREE MISSILES INDIVIDUALLY. THE APPLICATION OF AN ADDITIONAL EXTERNAL DATA SOURCE COULD RESULT IN THE TARGET NOT BEING DESTROYED IN AN IDEAL DISTANCE FROM THE DEFENDED TERRITORY. THE TRIPLED INDIVIDUAL SYSTEM OF DATA GATHERING BY THE SOUND MISSILES INTEGRAL TECHNOLOGY IS CONSIDERED TO BE CRUCIAL. IT MUST BE NOTED THAT THE ABOVE DEVICE CAN BE REPLACED WITH OTHER DEVICES PROVIDING THE SAME, OR SIMILAR EFFECT, YET SUCH A DESIGN ALTERATION IS NOT CONSIDERED TO BE BENEFICIAL.

THE **TARGET SPEED ANALYSIS UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. THE GUIDANCE SYSTEM OF THE SOUND MISSILE MUST BE ABLE TO ASSESS THE SPEED OF THE TARGET AT ALL TIMES. THE ABOVE UNIT MAY BE SUBSTITUTED BY OTHER DEVICES ACTING IN PRINCIPLE, BY OTHER PHYSICAL MEANS, OR FOR INSTANCE, EXTERNALLY WHEN THE DATA WOULD BE GATHERED BY THE DEFENCE SATELLITE SYSTEM. WHEN THE SOUND MISSILES ARE ALREADY IN FLIGHT TOWARDS THE SELECTED TARGET, IT IS NOT BENEFICIAL FOR THE MISSILES TO RELY ON THE DATA THAT COULD FOR EXAMPLE BE GATHERED EXTERNALLY AND TRANSMITTED VIA THE COMMAND CENTRE TO THE SOUND MISSILE.

TIME WOULD BE LOST IN THE PROCESS AND THE THREE LAUNCHED MISSILES HAVE THE CAPABILITY OF COMPARISON AS THE DATA IS BEING GATHERED BY ALL THREE MISSILES INDIVIDUALLY. THE APPLICATION OF AN ADDITIONAL DATA SOURCE COULD RESULT IN THE TARGET NOT BEING DESTROYED AT A MAXIMUM POSSIBLE DISTANCE FROM THE DEFENDED TERRITORY. THE TRIPLED INDIVIDUAL SYSTEM OF DATA GATHERING BY THE SOUND MISSILES INTEGRAL TECHNOLOGY IS CONSIDERED TO BE CRUCIAL. IT MUST BE NOTED THAT THE ABOVE DEVICE CAN ALSO BE REPLACED WITH OTHER DEVICES PROVIDING THE SAME, OR SIMILAR EFFECT, YET SUCH A DESIGN ALTERATION IS NOT CONSIDERED TO ACHIEVE MAXIMUM BENEFIT.

THE **TARGET COORDINATION ANALYSIS UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. THE GUIDANCE SYSTEM OF THE SOUND MISSILE MUST BE ABLE TO ASSESS THE EXACT COORDINATES OF THE TARGET AT ALL TIMES. THE ABOVE UNIT MAY BE SUBSTITUTED BY OTHER DEVICES ACTING IN PRINCIPLE ONLY ON OTHER PHYSICAL MEANS, OR FOR INSTANCE, EXTERNALLY WHERE THE DATA WOULD BE GATHERED BY THE DEFENCE SATELLITE SYSTEM. WHEN THE SOUND

MISSILES ARE ALREADY IN FLIGHT TOWARDS THE SELECTED TARGET, IT IS NOT BENEFICIAL FOR THE MISSILES TO RELY ON THE DATA THAT COULD FOR EXAMPLE BE GATHERED EXTERNALLY AND TRANSMITTED VIA THE COMMAND CENTRE TO THE SOUND MISSILES.

TIME WOULD BE LOST IN THE PROCESS AND THE THREE LAUNCHED MISSILES ALREADY HAVE THE CAPABILITY OF COMPARISON AS THE DATA IS BEING GATHERED BY ALL THREE MISSILES INDIVIDUALLY. THE APPLICATION OF AN ADDITIONAL DATA SOURCE COULD RESULT IN THE TARGET NOT BEING DESTROYED IN A MAXIMUM POSSIBLE DISTANCE FROM THE DEFENDED TERRITORY. THE TRIPLED INDIVIDUAL SYSTEM OF DATA GATHERING BY THE SOUND MISSILES INTEGRAL TECHNOLOGY IS CONSIDERED TO BE CRUCIAL. IT MUST BE NOTED THAT THE ABOVE DEVICE CAN ALSO BE REPLACED WITH OTHER DEVICES PROVIDING THE SAME, OR SIMILAR EFFECT; YET, SUCH AN ALTERNATIVE TO THE DESIGN IS NOT CONSIDERED TO BE BENEFICIAL.

THE **SELF DESTRUCT UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION. IT IS CONSIDERED TO BE A NECESSITY TO ACCOUNT FOR SUCH AN EVENT, WHERE ANY PART OF THE SYSTEM MAY FAIL TO FUNCTION EITHER INDIVIDUALLY, OR IN CONJUNCTION WITH ANOTHER PART. IF SUCH AN OCCASION OCCURS, THE SYSTEM MUST BE CONSTRUCTED TO POSSESS THE ABILITY TO ACTIVATE A SELF DESTRUCTION PROCESS PRIOR TO ANY INCORRECT TARGET BEING ELIMINATED. IN ADDITION, THE COMMAND CENTRE MUST POSSESS THE ABILITY TO ACTIVATE THE SELF DESTRUCT SEQUENCE TO TAKE PLACE IN THIS OR ANY OTHER APPROPRIATE CIRCUMSTANCES.

THE SELF DESTRUCT SYSTEM SHOULD IN THE OPINION OF THE INVENTOR, BE CONSTRUCTED AS PARALLEL ACTING, SO THAT IT HAS THE ABILITY TO DESTROY THE DRONE/SOUND MISSILE OR THE SOUND MISSILE ON ITS OWN WITHOUT AN ACTIVATION ORDER BEING RECEIVED FROM THE COMMAND CENTRE, AS WELL AS WITH THAT OPTION AT HAND. IT CAN ALSO BE CONSTRUCTED AS PROPOSED ONLY WITH THE OPTION OF AN ACTIVATION ORDER BEING RECEIVED FROM THE COMMAND CENTRE. IRRESPECTIVE OF THESE TWO OPTIONS, THE SYSTEM MUST NOT BE DISREGARDED AND HAS TO BE INCLUDED IN THE FINAL DESIGN.

THE **SELF DESTRUCT CHARGE** IS AN ESSENTIAL FEATURE OF THE INVENTION. A SET OF EXPLOSIVE CHARGES THAT ARE SUFFICIENTLY EFFECTIVE IN RELATIVELY SMALL VOLUMES MUST BE INCLUDED IN THE DESIGN FOR THE SAME REASONS AS MENTIONED IN THE ABOVE ARTICLE. THE EXPLOSIVE CHARGES MAY COMPRISE OF ANY SUITABLE EXPLOSIVE. THE RECOMMENDED, FROM THOSE THE INVENTOR IS AWARE OF, IS EITHER "C2" OR "SEMTEX".

THE **TOP SIDE GLASS COVER** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. THE ABOVE GLASS COVER EXECUTES THE SAME FUNCTIONS AS THE GLASS HEAD, BUT FROM A DIFFERENT POSITION

AND ALSO IN THAT DIRECTION WITH AN ADDITIONAL AMOUNT OF PRECISION AND RANGE. THE PARALLEL SYSTEM IS DESIGNED IN THIS MANNER TO PROVIDE MAXIMUM EFFICIENCY AND PRECISION. THE ABOVE COVER COULD BE LEFT OUT OF THE DESIGN COMPLETELY, AND THE PRIMARY SYSTEM CONSISTING OF THE GLASS HEAD COVER WOULD STILL WORK WITH A HIGH LEVEL OF EFFICIENCY AND PRECISION ON ITS OWN.

HOWEVER, AS THE DEFENCE SYSTEM IS DESIGNED TO OPERATE IN A CIRCUMFERENCE THAT IS TO DETECT ANY INCOMING THREATS FROM EXTERNAL POSITIONS, IT IS FELT THAT A MULTIPLE POINT SYSTEM COVERING ALL POSSIBLE ANGLES IS BOTH, THE MOST APPROPRIATE AND THE MOST EFFECTIVE. THIS FEATURE ALSO PROVIDES THE SONIC RECOGNITION SYSTEM WITH AN ADDITIONAL ABILITY TO COMPARE THE RECEIVED SONIC DATA FROM BOTH SOURCES AT ONCE; SO MORE RELIABILITY CAN BE ESTABLISHED.

THE **TOP SIDE COVER SUSPENSION UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION IF A TOP SIDE GLASS COVER IS USED. IF THE TOP SIDE GLASS COVER WOULD BE FIXED TO THE REST OF THE SOUND MISSILE FUSELAGE, IT WOULD HAVE NO ROOM TO VIBRATE IN A CONTROLLED MANNER. THE RECEIVED SONIC VIBRATIONS COULD RESULT IN DISTORTIONS OF A SEVERE TYPE. THEREFORE, THE SONIC RECOGNITION SYSTEM MAY MISINTERPRET SUCH VIBRATIONS, THUS WRONGLY IDENTIFY THE OBJECT.

A NUMBER OF ALTERNATIVE TECHNICAL SOLUTIONS AND DESIGN VARIATIONS COULD BE USED FOR THE SUSPENSION OF THE ABOVE GLASS COVER WITHIN THE SOUND MISSILE FUSELAGE. IN THE OPINION OF THE INVENTOR THE VARIOUS DESIGNS ARE IN FACT IRRELEVANT AS ONLY SUCH FINAL DESIGNS FOR THIS PART THAT WILL PROVIDE THE MOST EFFECTIVE RESULTS AFTER TESTING WOULD BE INCLUDED IN THE FINAL DESIGN.

THE **TOP SIDE COVER SEAL** IS NOT AN ESSENTIAL PART OF THE INVENTION. WHERE NO SUSPENSION IS USED FOR THE LINK BETWEEN THE SOUND MISSILE TOP SIDE GLASS COVER AND THE MISSILE FUSELAGE, THIS FORM OF A SEAL WOULD BECOME REDUNDANT. OTHER TECHNOLOGICAL SOLUTIONS COULD BE SOUGHT IN RESPECT OF MATERIAL AND FORM, AS WELL AS ALL TECHNICAL ASPECTS. THE SEAL MAY ALSO BE REPLACED WITH A SEALANT MATERIAL THAT CREATES A FIRM FIXED BOND, OR A MORE FLEXIBLE ONE.

THE **LOWER SIDE GLASS COVER** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. THE ABOVE GLASS COVER EXECUTES THE SAME FUNCTIONS AS THE GLASS HEAD, BUT FROM A DIFFERENT POSITION AND ALSO IN THAT DIRECTION WITH AN ADDITIONAL AMOUNT OF PRECISION AND RANGE. THE PARALLEL SYSTEM IS DESIGNED IN THIS MANNER TO PROVIDE MAXIMUM EFFICIENCY AND PRECISION. THE LOWER SIDE GLASS COVER COULD BE LEFT OUT OF THE DESIGN COMPLETELY, AND THE PRIMARY GLASS HEAD COVER SONIC

RECOGNITION SYSTEM WOULD STILL WORK WITH A SUFFICIENT LEVEL OF EFFICIENCY AND PRECISION ON ITS OWN.

HOWEVER, AS THE SOUND MISSILE DEFENCE SYSTEM IS DESIGNED TO OPERATE IN A CIRCUMFERENCE THAT IS TO DETECT ANY INCOMING THREATS FROM EXTERIOR SOURCES, IT IS FELT THAT A MULTIPLE POINT SONIC RECOGNITION SYSTEM COVERING ALL POSSIBLE ANGLES IS THE MOST APPROPRIATE ONE AND THE MOST EFFECTIVE. THIS FEATURE PROVIDES THE SONIC RECOGNITION SYSTEM WITH AN ADDITIONAL ABILITY OF COMPARING THE RECEIVED SONIC DATA FROM ALL SOURCE POINTS AT ONCE, WHERE MORE RELIABILITY CAN BE ESTABLISHED.

THE **LOWER SIDE COVER SUSPENSION UNIT** IS AN ESSENTIAL FEATURE OF THE INVENTION IF A LOWER SIDE GLASS COVER IS USED. IF THE LOWER SIDE GLASS COVER WOULD BE FIXED TO THE SOUND MISSILE FUSELAGE, IT WOULD NOT HAVE THE ABILITY TO VIBRATE IN A CONTROLLED MANNER. THE RECEIVED SONIC VIBRATIONS WOULD BE BADLY DISTORTED BEFORE THE ANALYSIS PROCESS AND THIS COULD RESULT IN MISINTERPRETATION BY THE RECOGNITION SYSTEM.

A NUMBER OF ALTERNATIVE TECHNICAL SOLUTIONS AND VARIOUS DESIGNS COULD BE USED FOR THE SUSPENSION OF THE ABOVE GLASS COVER WITHIN THE SOUND MISSILE FUSELAGE. IN THE OPINION OF THE INVENTOR THE VARIOUS DESIGNS AND ALTERNATIVES ARE IN FACT IRRELEVANT AS ONLY SUCH FINAL DESIGN FOR THIS PART THAT WILL PROVIDE THE MOST EFFECTIVE RESULTS IN TESTING WOULD BE INCLUDED IN THE FINAL DESIGN OF THE INVENTION.

THE **LOWER SIDE COVER SEAL** IS NOT AN ESSENTIAL PART OF THE INVENTION. WHERE NO SUSPENSION IS USED FOR THE LINK BETWEEN THE SOUND MISSILE'S LOWER SIDE GLASS COVER AND THE MISSILE'S FUSELAGE THIS FORM OF A SEAL WOULD BECOME REDUNDANT. OTHER TECHNOLOGICAL SOLUTIONS COULD BE SOUGHT IN RESPECT OF MATERIAL AND FORM, AS WELL AS ALL TECHNICAL ASPECTS. THE SEAL MAY ALSO BE REPLACED WITH A SEALANT MATERIAL THAT CREATES A FIRM FIXED BOND, OR A MORE FLEXIBLE ONE.

THE **RIGHT WING FLAP** IS AN ESSENTIAL PART OF THE INVENTION. ONE OF ITS MAIN PURPOSES IS TO PROVIDE THE SOUND MISSILE WITH A LAUNCH PLATFORM, (CARRIER DRONE), BASED ON THE OUTER PERIMETER. THE DRONE, WHICH IS DESIGNED TO FULFIL THIS PURPOSE, MUST INCLUDE A DIRECTIONAL WING FLAP POSITIONED ON THE RIGHT HAND SIDE TO PROVIDE A CORRECTION CAPABILITY IN RESPECT OF FLIGHT CHARACTERISTICS. THE DIRECTIONAL FLAPS CANNOT BE SUBSTITUTED BY ANY OTHER BETTER FUNCTIONING DEVICE.

THE CONSTRUCTION AND DESIGN OF THESE DIRECTIONAL FLAPS IS A MATTER OF CONSIDERATION AND CAN BE ALTERED DEPENDING ON

THE DESIGN OF THE DRONE. THE PROPOSED KEVLAR COMPOSITE HOLLOW FOAM FILLED DESIGN CAN ALSO BE SUBSTITUTED BY OTHER TECHNICAL SOLUTIONS. ANY ALTERNATIVES OR REPLACEMENTS ARE IN FACT IRRELEVANT TO THE PROPOSED DESIGN, AS ONLY A BETTER TECHNICAL SOLUTION WOULD BE ACCEPTED.

THE **LEFT WING FLAP** IS AN ESSENTIAL PART OF THE INVENTION. ONE OF ITS MAIN PURPOSES IS TO PROVIDE THE SOUND MISSILE WITH A LAUNCH PLATFORM, (CARRIER DRONE), BASED ON THE OUTER DEFENCE PERIMETER. THE DRONE, WHICH IS DESIGNED TO FULFIL THIS PURPOSE, MUST INCLUDE A DIRECTIONAL WING FLAP POSITIONED ON THE LEFT HAND SIDE TO PROVIDE A CORRECTION CAPABILITY IN RESPECT OF FLIGHT CHARACTERISTICS. THE DIRECTIONAL FLAPS CANNOT BE SUBSTITUTED BY ANY OTHER BETTER FUNCTIONING DEVICE.

THE CONSTRUCTION AND DESIGN OF THE DIRECTIONAL FLAPS IS A MATTER OF CONSIDERATION AND CAN BE ALTERED DEPENDING ON THE DESIGN OF THE DRONE. THE PROPOSED KEVLAR COMPOSITE HOLLOW FOAM FILLED DESIGN CAN ALSO BE SUBSTITUTED BY OTHER TECHNICAL SOLUTIONS. ANY FORM OF ALTERNATIONS OR REPLACEMENTS ARE IN FACT IRRELEVANT TO THE PROPOSED DESIGN, AS ONLY A BETTER TECHNICAL SOLUTION WOULD BE ACCEPTED.

THE **REAR RIGHT SIDE FLAP** IS NOT AN ESSENTIAL PART OF THE INVENTION. THE CORRECTION CAPABILITY IN RESPECT OF FLIGHT CHARACTERISTICS CAN BE FULLY TAKEN CARE OF BY A SET OF TWO DIRECTIONAL FLAPS POSITIONED ONLY ON THE MAIN WING OF THE DRONE'S FUSELAGE. THE FOUR DIRECTIONAL FLAP DESIGN HAS BEEN CHOSEN SOLELY FOR THE PURPOSE OF ACHIEVING BETTER PRECISION.

THE PROPOSED KEVLAR COMPOSITE HOLLOW FOAM FILLED DESIGN CAN ALSO BE ALTERED THROUGH THE USE OF OTHER TECHNICAL SOLUTIONS AND VARIOUS DESIGNS. ANY FORM OF AVAILABLE ALTERNATIONS OR REPLACEMENTS ARE IN FACT IRRELEVANT TO THE PROPOSED DESIGN, AS ONLY A BETTER TECHNICAL SOLUTION WOULD BE ACCEPTED AS A REPLACEMENT IN THE FINAL DESIGN.

THE **REAR LEFT SIDE FLAP** IS NOT AN ESSENTIAL PART OF THE INVENTION. THE CORRECTION CAPABILITY IN RESPECT OF FLIGHT CHARACTERISTICS CAN BE FULLY TAKEN CARE OF BY A SET OF TWO DIRECTIONAL FLAPS POSITIONED ONLY ON THE MAIN WING OF THE DRONE'S FUSELAGE. THE FOUR DIRECTIONAL FLAP DESIGN HAS BEEN CHOSEN SOLELY FOR THE PURPOSE OF ACHIEVING BETTER PRECISION.

THE PROPOSED KEVLAR COMPOSITE HOLLOW FOAM FILLED DESIGN CAN ALSO BE ALTERED THROUGH THE USE OF OTHER TECHNICAL SOLUTIONS AND VARIOUS DESIGNS. ANY FORM OF AVAILABLE ALTERNATIONS OR REPLACEMENTS ARE IN FACT IRRELEVANT TO THE PROPOSED DESIGN, AS ONLY A BETTER TECHNICAL SOLUTION WOULD BE ACCEPTED AS A REPLACEMENT IN THE FINAL DESIGN.

THE **STABILISER** IS AN ESSENTIAL FEATURE OF THE INVENTION, BUT ITS FORM AND DESIGN AS WELL AS INNER STRUCTURE ARE ONLY A MATTER OF OPINION. IN SOME DESIGN VARIATIONS, THE STABILISER COULD BE LEFT OUT COMPLETELY FROM THE FINAL DESIGN OR ITS POSITION ALTERED. HOWEVER, IT IS CONSIDERED TO BE ADVISABLE THAT SOME FORM OF A STABILISER IS INCLUDED IN THE DRONE FUSELAGE DESIGN, IF ONLY FOR THE SOLE PURPOSE OF PROVIDING STRUCTURAL FIXATION AND ROTATING JOINTS FOR THE RUDDER. THE PROPOSED KEVLAR COMPOSITE HOLLOW FOAM FILLED DESIGN CAN OF COURSE BE ALSO ALTERED THROUGH THE USE OF OTHER TECHNICAL SOLUTIONS.

THE **RUDDER** IS AN ESSENTIAL FEATURE OF THE INVENTION. HOWEVER, ITS FORM AND DESIGN IN RESPECT OF THE INNER STRUCTURE AND THE MATERIAL ARE SIMPLY A MATTER OF OPINION. IN SOME DESIGN VARIATIONS, THE RUDDER COULD BE EITHER LEFT OUT COMPLETELY, OR SUBSTITUTED BY OTHER SIMILARLY, ACTING DEVICES AND ITS POSITION COULD ALSO BE ALTERED.

NEVERTHELESS, IT IS CONSIDERED TO BE BENEFICIAL THAT SOME FORM OF A RUDDER IS INCLUDED IN THE DRONE FUSELAGE DESIGN, IF ONLY FOR THE SOLE PURPOSE OF PROVIDING BETTER FLIGHT CHARACTERISTICS AND MORE RESPONSIVE CORRECTIONS. THE PROPOSED KEVLAR COMPOSITE HOLLOW FOAM FILLED DESIGN CAN ALSO BE ALTERED THROUGH THE USE OF OTHER TECHNICAL SOLUTIONS.

THE **PARACHUTE** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. IT IS DESIGNED TO PROVIDE THE DEFENCE SYSTEM OPERATOR WITH THE OPTION OF SAVING THE COMPLETE DRONE WITH THE SOUND MISSILE, OR THE DRONE ON ITS OWN IN AN EVENT OF SYSTEMS FAILURE. IT IS PRIMARILY FOR SAFETY AND THEN FINANCIAL REASONS THAT THIS FEATURE IS INCLUDED IN THE MAIN DESIGN.

AS SUCH, THE PARACHUTE COULD BE EXCLUDED FROM THE DESIGN, BUT ONE WOULD HAVE TO CONTEMPLATE WHAT WOULD HAPPEN IF THE DRONE, FOR EXAMPLE, IMPACTED INTO A SHIP PRIOR TO SELF DESTRUCTION DURING THE PROCESS OF FREE FALL OR SIMILAR OCCASIONS WHERE NOT ONLY THE LOSS OF THE MISSILE AND THE DRONE WOULD HAVE TO BE ACCOUNTED FOR. THE PROPOSED DESIGN INCORPORATING THIS FEATURE IS CONSIDERED TO BE THE ONLY ONE THAT PROVIDES MAXIMUM SAFETY ASPECTS.

THE **PARACHUTE COMPARTMENT** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. WITH REGARD TO THE ABOVE ARTICLE, IT IS CLEAR THAT IF NO PARACHUTE IS ESSENTIAL, NEITHER IS ITS COMPARTMENT. THE ABOVE FEATURE CANNOT BE SUBSTITUTED BY ANY OTHER MORE EFFICIENT TECHNICAL SOLUTION.

THE **PARACHUTE EXPLOSIVE THRUST CHARGE** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. WITH REGARD TO THE TWO ABOVE

ARTICLES, IF NO PARACHUTE, OR ITS COMPARTMENT ARE ESSENTIAL, THE PARACHUTE EXPLOSIVE THRUST CHARGE IS NOT EITHER. THE ABOVE FEATURE CAN BE SUBSTITUTED BY ANY OTHER CHEMICAL COMPOUND DEPENDING ON THE ADVANTAGES SUCH SUBSTITUTIONS WOULD PROVIDE. SOME OF THE FACTORS THAT ARE TO BE CONTEMPLATED ARE THOSE OF WEIGHT, DESTRUCTIVE EFFICIENCY, RELIABILITY, IF THE EXPLOSIVE IS STABLE ENOUGH FOR THE TEMPERATURE RANGES IT MUST WITHSTAND AND OPERATE UNDER. ITS DETONATORS MUST ALSO BE CAPABLE OF DETONATION BY RADIO SIGNAL.

THE **DRONE THRUST TURBINE ENGINE** IS NOT AN ESSENTIAL FEATURE OF THE INVENTION. ALTERNATIVE PROPULSION UNITS MAY BE CHOSEN FOR DRONE PROPULSION. THE PROPOSED STANDARD, BUT SMALLER AND FUEL EFFICIENT THRUST UNIT IS CHOSEN PRECISELY FOR THE ABOVE ASPECTS. THERE ARE PRACTICALLY NO RESTRICTIONS IN RESPECT OF SUBSTITUTIONS FOR THE PROPULSION OF THE DRONE. THE ONLY CRITERIA IS THAT IT IS CAPABLE OF REACHING THE REQUIRED CRUISING SPEED, AND IS RELIABLE. NO PROPELLER ENGINE CAN BE USED FOR THE DRONE.

THE **DRONE THRUST ENGINE EXHAUST** IS AN ESSENTIAL FEATURE OF THE INVENTION. ANY KIND OF A PROPULSION UNIT FOR THE DRONE THAT MAY BE INCLUDED IN THE FINAL DESIGN WILL REQUIRE AN EXHAUST. THE SIZE, FORM, DESIGN, MATERIAL, SET UP AND PRECISE POSITION OF THE EXHAUST ARE ONLY A MATTER OF TESTING ALTERNATIVE DESIGNS.

THE **DRONE FUEL TANK** IS AN ESSENTIAL FEATURE OF THE INVENTION. FUEL HELD IN TANKS IN A SUFFICIENT AMOUNT IS REQUIRED FOR THE PROPULSION UNIT OF THE DRONE. THE FUEL TANK CONSTRUCTION BY THE USE OF THE INNER HOLLOW SPACE OF THE DRONE'S FUSELAGE CAN ALTERNATIVELY BE SUBSTITUTED BY TANKS MADE OF ALUMINIUM, PLASTIC MATERIALS, RUBBER, ETC. THE FUEL TANKS CAN OF COURSE DIFFER IN SIZE, POSITION, AND MANY OTHER DESIGN FACTORS.

THE PROPOSED DESIGN HAS BEEN CHOSEN TO ACHIEVE MAXIMUM WEIGHT SAVINGS AND A LARGER FUEL CAPACITY COMPARED TO OTHER POSSIBLE ALTERNATIVES. THE ALTERNATIVE FUEL TANKS CAN BE CONSTRUCTED AS INDIVIDUAL SEALED UNITS MOUNTED INTO THE FUSELAGE AND WINGS WITH FITTINGS, CAN BE A FIXED PART OF THE DRONE'S FUSELAGE, CAN BE DETACHABLE OR ANY OTHER DESIGN AT HAND. ADDITIONAL FUEL TANKS MAY ALSO BE POSITIONED EXTERNALLY IF REQUIRED, OR CONSIDERED TO BE BENEFICIAL.

TECHNICAL REQUIREMENTS & LIMITATIONS:

THE **COMMAND CENTRE**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE ABOVE FEATURE OF THE INVENTION. THE REQUIREMENTS AND

LIMITATIONS ARE THOSE APPLIED TO OTHER EXISTING MILITARY SYSTEMS COMMONLY SPECIFIED AS EARLY WARNING.

THE **DEFENCE PERIMETER**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE ABOVE FEATURE OF THE INVENTION. THE REQUIREMENTS AND LIMITATIONS ARE GIVEN AUTOMATICALLY WHEN CONSIDERING WHICH TERRITORY IS TO BE DEFENDED.

THE **DRONE** FUSELAGE STRUCTURE IS TO BE MANUFACTURED OF KEVLAR REINFORCED COMPOSITE. THE FUSELAGE WINGS ARE TO BE INTERNALLY REINFORCED WITH STRUCTURAL WALLING THAT INCORPORATES SMALL ORIFICES FOR THE FUEL TO BE ABLE TO PASS THROUGH THE INNER SECTIONS IN A RESTRICTED MANNER. A FORM MUST BE MANUFACTURED FOR THE COMPLETE FUSELAGE.

THE **SOUND MISSILE** INNER CASING IS TO BE MANUFACTURED OF A HEAT RESISTANT ALUMINIUM ALLOY INTO WHICH THE INNER SOLID FUEL TANK IS TO BE INSERTED. THE SANDWICH STRUCTURE OF AIR LEADING TUNNELS TO BE PLACED OVER THE INNER CASING IS TO BE MANUFACTURED ALSO FROM A HEAT RESISTANT ALUMINIUM ALLOY. THE OUTER MISSILE CASING IS TO BE MANUFACTURED OF A ONE PIECE TITANIUM TUBE THAT IS DIVIDED FROM THE INNER ALUMINIUM ALLOY STRUCTURE POSITIONED BENEATH IT BY A SECTION FILLED WITH SODIUM.

THE **MISSILE LAUNCH TUBE** IS TO BE MANUFACTURED IN ONE PIECE WITH THE DRONE'S FUSELAGE FROM KEVLAR REINFORCED COMPOSITE STRUCTURE.

THE **MISSILE LOCKING MECHANISM** IS A MULTIPLE PART FEATURE CONSISTING OF AN ELECTRONICALLY OPERATED SLIDING MECHANISM WHERE THE LOCKING SEGMENTS ARE TO BE MANUFACTURED FROM A STANDARD STEEL.

THE **MISSILE FLAP RETRACTION GROOVES** ARE MANUFACTURED IN ONE PIECE WITH THE MISSILE LAUNCH TUBE AND THE DRONE'S FUSELAGE FROM KEVLAR(TM) REINFORCED COMPOSITE. THE PRECISION THAT IS THE MAIN REQUIREMENT FOR THIS PROCESS DEPENDS ON THE LEVEL OF PRECISION IN THE MANUFACTURE OF THE PRIMARY MOULDS FOR THE DRONE'S FUSELAGE AND ALL ITS SECTIONS. THESE ARE CRUCIAL.

THE **MISSILE FRONT DIRECTIONAL FLAPS** ARE MANUFACTURED FROM TITANIUM PLATES SHAPED TO FORM THE OUTLINE OF THE FLAP. THE INNER STRUCTURE OF THE FLAP INCORPORATES A HOLLOW SPACE THAT IS TO BE FILLED WITH SODIUM FOR COOLING PURPOSES.

THE **MISSILE REAR DIRECTIONAL FLAPS** ARE TO BE MANUFACTURED INDIVIDUALLY FROM TITANIUM PLATES SHAPED TO FORM THE OUTLINE OF THE FLAP. THE INNER STRUCTURE OF THE FLAP

INCORPORATES A HOLLOW SPACE THAT IS TO BE FILLED WITH SODIUM FOR COOLING PURPOSES.

THE **MISSILE THRUST PROPULSION UNIT**; THE PROPOSED PROPULSION UNIT IS TO BE ONE USING SOLID ROCKET FUEL, WHERE AN ADDITIONAL SECOND LIQUID FUEL TANK IS TO BE FITTED OVER THE ABOVE WITH A SPACE CREATED IN BETWEEN. THE PURPOSE OF THE LIQUID FUEL TANK AND THE TECHNICAL REQUIREMENTS WILL BE SPECIFIED IN A PATENT REQUEST AT A LATER STAGE. NO OTHER EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED IF A STANDARD SOLID FUEL MISSILE THRUST PROPULSION UNIT WOULD BE USED INSTEAD. THE REQUIREMENTS AND LIMITATIONS FOR SUCH AN ENGINE ARE THOSE COMMONLY USED IN STANDARD DESIGNS OF SOLID FUEL MISSILE PROPULSION UNITS ALREADY IN EXISTENCE.

THE **MISSILE THRUST ENGINE EXHAUST** IS TO BE THE ONE USED FOR FIGHTER JETS, WHOSE STRUCTURE ENABLES DIRECTIONAL REGULATIONS. THE MATERIALS AND TECHNICAL SPECIFICATIONS ARE THE SAME AS IN CASE OF THE ABOVE MENTIONED EXHAUST. ALTERNATIVELY, IF A STANDARD FORM OF AN EXHAUST WITHOUT DIRECTIONAL CAPABILITIES IS USED NO TECHNICAL SPECIFICATIONS ARE NEEDED EITHER.

THE **MISSILE SOLID FUEL TANK** IS TO BE MANUFACTURED OF STEEL ALLOY (RA330) OF A CYLINDRICAL SHAPE.

THE **MISSILE LIQUID FUEL TANK** IS TO BE MANUFACTURED AS A HEAT RESISTANT DOUBLE SKINNED TUBE ENCLOSED FROM BOTH SIDES. THE ABOVE TUBE IS TO BE COATED FROM THE INSIDE WITH CERAMICS.

THE **MISSILE GLASS HEAD**; THE GLASS MATERIAL USED FOR THE MANUFACTURE OF THE SOUND MISSILE HEAD MUST HAVE THE FOLLOWING CHARACTERISTICS: IT MUST BE OF A MAXIMUM RIGIDITY AND HEAT RESISTANCE WHILE MAINTAINING A THIN SKIN. THE GLASS HEAD MUST BE MOULDED INTO A FORM THAT CREATES THE 16 TUBULAR SECTIONS, PASSING THROUGH THE GLASS HEAD FROM THE FRONT SECTION AND EXIT AT THE BACK. THE GLASS HEAD IS MANUFACTURED IN TWO SECTIONS, ONE SECTION BEING THE GLASS HEAD INCORPORATING ALL THE TUBES, AND SECOND SECTION IS THE REAR SECTION GLASS COVER THAT IS TO BE SEALED WITH THE HEAD AFTER ALL THE REQUIRED TECHNOLOGY HAD BEEN INSERTED INTO IT.

THE **MISSILE GLASS HEAD SUSPENSION UNIT** SEGMENTS ARE CONSTRUCTED AS INDIVIDUAL UNITS OF A PISTON LIKE ALUMINIUM ALLOY SHAPE. EACH OF THE INDIVIDUAL UNITS IS SPRING LOADED WITH A CALIBRATED STEEL SPRING. THE UNITS ARE JOINED TO ONE ANOTHER, THE GLASS HEAD, AND THE SOUND MISSILE FUSELAGE BY ALUMINIUM ALLOY "V" SEGMENTS WITH HOLES FOR SPECIAL BOLTS

THAT ARE SECURED WITH SPECIAL NUTS, PROVIDING THE STRUCTURE WITH SUFFICIENT AMOUNT OF FREE MOVEMENT.

THE **MISSILE GLASS HEAD SEAL** IS TO BE MANUFACTURED FROM A HIGH ELASTICITY, TEMPERATURE, AND FLAME RESISTANT SILICONE COMPOUND.

THE **CENTRAL PROCESSOR UNIT**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE CENTRAL PROCESSOR UNIT. ITS REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF THE ABOVE FEATURE FOR ANY. OTHER SIMILAR FORM OF MISSILE OR MILITARY SYSTEMS ALREADY IN EXISTENCE.

THE **SONIC VIBRATIONS ANALYSIS UNIT**;. NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE SONIC VIBRATIONS ANALYSIS UNIT OTHER THAN THE ABSOLUTE NECESSITY TO USE THE MOST SENSITIVE VIBRATION DETECTORS AND ELECTRICAL CURRENT MEASURING DEVICES AVAILABLE. THE AMPLIFYING TECHNOLOGY USED FOR THE SYSTEM MUST PROVIDE THE MAXIMUM POSSIBLE EFFICIENCY WHILE RETAINING THE MINIMUM POSSIBLE SIZE. OTHER REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS USED IN A STANDARD MANNER IN DESIGNS OF HIGH SPECIFICATION AUDIO TECHNOLOGY AND ACOUSTIC RECOGNISANCE SYSTEMS ALREADY IN EXISTENCE FOR EXAMPLE IN THE LATEST CLASSES OF NUCLEAR SUBMARINES.

THE **SONIC DATABASE UNIT**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE SONIC DATABASE UNIT. ITS REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF THE ABOVE FEATURE FOR EXAMPLE IN SPECIALISED COMPUTER PROGRAMS THAT TRANSFORM SOUNDS INTO DIGITAL FORM, GRAPHICAL PATTERNS, AND POSSESS THE ABILITY OF COMPARISON. IT MUST ALSO HAVE THE CAPACITY TO CONTAIN THE MAXIMUM NUMBER OF SONIC FINGERPRINTS AVAILABLE.

THE **DIGITAL IMAGING UNIT**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE DIGITAL IMAGING UNIT. ITS REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF THE ABOVE FEATURE FOR ANY OTHER SIMILAR FORM OF MISSILE AND MILITARY SYSTEMS ALREADY IN EXISTENCE.

THE **DIGITAL IMAGING DATABASE UNIT**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE DIGITAL IMAGING DATABASE UNIT. ITS REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN COMPUTER PROGRAMMING AND RELATED SOFTWARE OF THE ABOVE FEATURE FOR ANY OTHER SIMILAR FORM OF STANDARD IMAGING DATABASES. THE EFFICIENCY AND OVERALL END RESULT THE DEPENDS ON THE

QUALITY OF THE IMAGES THAT ARE TO BE INSERTED INTO THE DATABASE AND LOGICALLY THE MAXIMUM NUMBER OF IMAGES TO BE GATHERED FOR THIS PURPOSE.

THE **DIGITAL IMAGING ANALYSIS UNIT**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE DIGITAL IMAGING ANALYSIS UNIT, OTHER THAN A MAXIMUM LEVEL OF ACCURACY IN THE PROCESS OF COMPARING A RECEIVED IMAGE WITH THE IMAGES OF THE IMAGING DATABASE. ITS OTHER REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF THE ABOVE FEATURE FOR ANY OTHER SIMILAR FORMS OF SYSTEMS ALREADY IN EXISTENCE.

THE **OPTICAL UNIT**; OTHER THAN THE NECESSITY TO EMPLOY A HIGHLY SENSITIVE AND ACCURATE AUTO FOCUS MECHANISM WITH AN INFRA RED VISION CAPABILITY, NO EXTRA SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE OPTICAL UNIT. ITS REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF THE ABOVE FEATURE FOR ANY OTHER SIMILAR FORMS OF HIGH SPECIFICATIONS OPTICAL RECOGNITION SYSTEMS ALREADY IN EXISTENCE.

THE **SATELLITE COMMUNICATIONS RECEPTION UNIT**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE SATELLITE COMMUNICATIONS RECEPTION UNIT. ITS REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF THE ABOVE FEATURE FOR ANY OTHER FORM OF MILITARY SYSTEMS USING EQUIPMENT BASED ON SATELLITE COMMUNICATIONS, WHICH IS ALREADY IN EXISTENCE.

THE **GYROSCOPE UNIT**; A STANDARD GYROSCOPE UNIT, HOWEVER SMALLER IN SIZE, THAT IS USED IN AIRCRAFT MANUFACTURE IS TO BE USED FOR THE SOUND MISSILE FLIGHT ANALYSIS SYSTEM.

THE **GLOBAL POSITIONING UNIT**; A GLOBAL POSITIONING UNIT OF A SMALLEST POSSIBLE SIZE IS TO BE USED FOR THE SOUND MISSILE FLIGHT ANALYSIS SYSTEM, SUCH AS "GPS" UNITS COMMONLY FITTED IN AIRCRAFT OR SHIP MANUFACTURE. THE KEY REQUIREMENTS ARE THAT THE UNIT MUST BE PRECISE, EFFICIENT, AND TAKE THE LEAST AMOUNT OF SPACE IN THE CONSTRUCTION.

THE **CENTRAL COMMAND RECEIVER UNIT**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THIS UNIT, EXCEPT THAT THE FREQUENCY USED MUST DIFFER FROM THE OTHER COMMUNICATIONS UNITS MOUNTED IN THE MISSILE. ITS OTHER REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY APPLIED IN DESIGNS OF THE ABOVE FEATURE FOR ANY SIMILAR FORMS OF MILITARY COMMUNICATIONS SYSTEMS, WHICH ARE CURRENTLY IN USE.

THE **CENTRAL COMMUNICATIONS UNIT**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE CENTRAL COMMUNICATIONS UNIT, EXCEPT THAT THE FREQUENCY USED MUST DIFFER FROM THE OTHER COMMUNICATIONS UNITS MOUNTED IN THE MISSILE. ITS OTHER TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY APPLIED IN DESIGNS OF THE ABOVE FEATURE FOR ANY OTHER SIMILAR FORM OF MILITARY COMMUNICATIONS SYSTEMS, WHICH ARE ALREADY IN EXISTENCE.

THE **INTER-DRONE COMMUNICATIONS UNIT**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE GIVEN FOR THE INTER-DRONE COMMUNICATIONS UNIT, EXCEPT THAT THE FREQUENCY USED FOR THIS UNIT MUST DIFFER FROM THE OTHER COMMUNICATIONS UNITS MOUNTED IN THE SOUND MISSILE. ITS OTHER TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF SIMILAR FEATURES FOR ANY FORM OF MILITARY COMMUNICATIONS SYSTEMS, WHICH ARE CURRENTLY IN USE.

THE **FLIGHT LEVEL ANALYSIS UNIT**; NO TECHNICAL REQUIREMENTS OF AN EXTRA ORDINARY NATURE OR LIMITATIONS NEED TO BE SPECIFIED FOR THIS UNIT. ITS TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY APPLIED IN DESIGNS OF THE ABOVE FEATURE FOR ANY OTHER FORM OF SYSTEMS DESIGNED TO GATHER FLIGHT CHARACTERISTICS AND RELATED DATA THAT ARE ALREADY IN EXISTENCE.

THE **FORCE ANALYSIS UNIT**; THE TECHNICAL REQUIREMENTS AND LIMITATIONS FOR THE FORCE ANALYSIS UNIT ARE THE FOLLOWING. BOTH OF THE GLASS TUBES FOR THE DEVICE ARE MANUFACTURED OF TRANSPARENT GLASS THAT POSSESSES FRICTION RESISTANCE PROPERTIES. THE MATERIAL OF THE GLASS TUBES MUST ALSO BE SUFFICIENTLY SHOCK RESISTANT. THE WALL OF THE GLASS TUBES IS TO BE IDENTICAL FOR BOTH TUBES, IN THE REGION OF 1,5 mm THICKNESS. THE TWO GLASS TUBES ARE TO BE SEALED FROM TOP AND BOTTOM BY PLASTIC MATERIAL COVERS THAT STRETCH OVER THE INSERTED MAGNETS. THE INNER TUBE IS OF A 10 mm DIAMETER, WHILE THE OUTER ONE IS OF 20 mm DIAMETER.

THE OUTER TUBE IS FITTED ON ONE SIDE WITH VERTICALLY SET ORIFICES, IN A STRAIGHT LINE, THAT MATCH PRECISELY THE POINTS ON THE SCALE. THE SCALE IS CREATED BY A CHEMICAL PROCESS APPLIED TO THE INNER SURFACE OF THE OUTER TUBE. THE SCALE STRETCHES FROM THE LOWEST POSITIONED MAGNET'S TOP EDGE TO THE BOTTOM EDGE OF THE TOP POSITIONED MAGNET. THE SCALE STEPS ARE NOT EQUAL TO ONE ANOTHER IN RESPECT OF one HALF OF THE SCALE TO THE OTHER. THE FORCES WITHIN THE INNER MAGNETIC FIELD AFFECT THE MOVEMENT OF THE CENTRALLY POSITIONED DOUBLE SIDED MAGNET, EACH IN A DIFFERENT MANNER. THEREFORE, MUST BE ACCOUNTED FOR. TO SIMPLIFY THE PROCESS,

ONE SETS THE ORIGIN AT THE MID POINT OF THE TUBE AND GIVES FORCE SCALES ARE MARKED FOR THE TOP AND LOWER SECTION OF THE SCALE.

THE FORCE OF GRAVITY, AFFECTING THE CENTRALLY POSITIONED DOUBLE SIDED MAGNET IS ANOTHER FACTOR THAT WILL DETERMINE THE EXACT SPACING INTERVALS BETWEEN THE SCALE LINES. THE OPTICAL RECEPTION SENSORS ARE GLUED INTO THEIR PRECISE RESPECTIVE POSITIONS ON THE OUTER SIDE OF THE OUTER GLASS TUBE. THE TOP AND BOTTOM MAGNETS ARE POLARISED SO THAT THEIR NEGATIVELY CHARGED SIDES POINT INWARDS INTO THE CYLINDRICAL FREE SPACE CREATED WITHIN THE INNER GLASS TUBE.

TWO OF THE MAGNETS ARE HELD IN THE GLASS TUBE BY MEANS OF A SEALANT MATERIAL. THE DOUBLE SIDED MID POSITIONED MAGNET IS CREATED BY TWO MAGNETS OF UNEQUAL CHARGE. THESE ARE FIXED TOGETHER, AND THE MID SECTION BETWEEN THEM INCORPORATES THE LIGHT SOURCE THAT EMITS THE BEAM. THE DOUBLE SIDED MAGNET IS FORMED BY A SANDWICH LIKE CONSTRUCTION. THE MID LOCATED SEGMENT BETWEEN THE TWO LINKED CENTRALLY POSITIONED MAGNETS IS MANUFACTURED OF A NON-MAGNETIC MATERIAL, SUCH AS ONE OF THE HARDER TYPES OF PLASTIC.

THE PLASTIC CENTRAL SEGMENT, BETWEEN THE TWO MAGNETS IN THE INNER GLASS TUBE MID SECTION, CONTAINS AN INSERTED LIGHT SOURCE THAT EMITS A CONSTRAINED INFRA RED LIGHT SHARP BEAM OF A MINIMAL THICKNESS. THE LIGHT BEAM POINTS DIRECTLY ONTO THE VERTICAL SCALE OF THE OUTER GLASS TUBE. THEREFORE, ONTO EACH RESPECTIVE LIGHT RECEPTION SENSOR. THE SENSORS USED FOR THE DEVICE DO NOT REQUIRE ANY SPECIFICATIONS OTHER THAN THEIR SIZE HAS TO BE SUFFICIENTLY SMALL TO FIT ONE ABOVE ANOTHER INTO THE POSITIONS ON THE SCALE.

AN ELECTRICAL CABLE, ABLE TO CARRY A CHARGE OF 9 VOLT IS REQUIRED FOR THE ASSEMBLY OF THE DEVICE. IT PASSES THROUGH THE LOWEST POSITIONED MAGNET AND THROUGH THE LOWER MAGNET OF THE TWO MID POSITIONED AND INTO THE LIGHT SOURCE. AT THE OPPOSITE END, THE CABLE IS THEN LINKED TO AN EXCHANGEABLE BATTERY THAT IS FITTED BENEATH THE DEVICE IN A SMALL COMPARTMENT.

THE **DIRECTIONAL ANALYSIS UNIT**; NO TECHNICAL REQUIREMENTS OF AN EXTRA ORDINARY NATURE OR LIMITATIONS NEED TO BE SPECIFIED FOR THE DIRECTIONAL ANALYSIS UNIT. THE TECHNICAL REQUIREMENTS AND LIMITATIONS FOR THIS FEATURE ARE ONLY THOSE AS COMMONLY APPLIED IN DESIGNS FOR ANY OTHER FORM OF FLIGHT DATA GATHERING EQUIPMENT OF SIMILAR NATURE ALREADY IN EXISTENCE.

THE **ANGLE-TO-TARGET ANALYSIS UNIT**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE

ANGLE-TO-TARGET ANALYSIS UNIT. ITS TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY USED IN DESIGNS OF ANY OTHER FORM OF INTELLIGENT MISSILE SYSTEM USING FLIGHT DATA GATHERING EQUIPMENT OF SIMILAR NATURE ALREADY IN USE.

THE **DISTANCE-TO-TARGET ANALYSIS UNIT**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS MUST BE SPECIFIED FOR THE DISTANCE-TO-TARGET ANALYSIS UNIT. ITS TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY APPLIED IN DESIGNS FOR ANY OTHER FORMS OF WEAPONS AIMING SYSTEMS AND EQUIPMENT OF A SIMILAR NATURE CURRENTLY IN USE.

THE **TARGET SPEED ANALYSIS UNIT**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THIS UNIT. ITS TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY APPLIED IN DESIGNS FOR ANY OTHER FORM OF WEAPONS AIMING SYSTEMS AND EQUIPMENT OF A SIMILAR NATURE ALREADY IN EXISTENCE.

THE **TARGET COORDINATION ANALYSIS UNIT**; NO TECHNICAL REQUIREMENTS OR LIMITATIONS OF AN EXTRA ORDINARY NATURE NEED TO BE SPECIFIED FOR THE TARGET COORDINATION ANALYSIS UNIT. THE TECHNICAL REQUIREMENTS AND LIMITATIONS OF THE ABOVE FEATURE ARE ONLY THOSE AS COMMON TO DESIGNS FOR ANY OTHER FORM OF WEAPONS AIMING SYSTEMS AND EQUIPMENT OF A SIMILAR KIND ALREADY IN USE.

THE **SELF DESTRUCT UNIT**; ONE OF THE POSSIBLE ALTERNATIVES IS A RADIO WAVE CONTROLLED COMMUNICATIONS UNIT FITTED WITH AN ELECTRONICALLY OPERATED HIGH VOLTAGE SPARK FEATURE. THIS IS USED AS THE MEANS FOR IGNITION OF THE DETONATORS THAT ARE IN A STANDARD POSITION INSERTED INTO THE MAIN EXPLOSIVE CHARGES. THE PROPERTIES OF ALL PARTS OF THIS UNIT MUST INCLUDE A HIGH LEVEL OF STABILITY AND RESISTANCE TO SHOCKS AND HIGH TEMPERATURES.

THE **SELF DESTRUCT CHARGE**; THE PROPOSED MAIN EXPLOSIVE CHARGES ARE EITHER "C2", "SEMTEX" OR ANY OTHER TYPE WITH SIMILAR PROPERTIES.

THE **TOP SIDE GLASS COVER**; A RECTANGULAR BASE SHAPE WITH ROUNDED CORNER SECTIONS IS THE BASIC SHAPE OF THE ABOVE COVER. THE COVER IS TO BE MANUFACTURED FROM GLASS HAVING THE SAME PROPERTIES AS THE ONE USED FOR THE MANUFACTURE OF THE FRONT POSITIONED MISSILE GLASS HEAD.

THE **TOP SIDE COVER SUSPENSION UNIT** PARTS ARE CONSTRUCTED AS INDIVIDUAL UNITS OF A MINIATURE PISTON LIKE ALUMINIUM ALLOY SHAPE. EACH OF THE INDIVIDUAL UNITS IS SPRING LOADED WITH A CALIBRATED STEEL SPRING. THE ABOVE UNITS ARE JOINED TO ONE ANOTHER, THE TOP SIDE GLASS COVER, AND THE SOUND MISSILE

FUSELAGE BY SPECIAL ALUMINIUM ALLOY "V" SEGMENTS WITH ORIFICES FOR SPECIAL BOLTS THAT ARE TO BE SECURED WITH SPECIAL NUTS, ALLOWING THE STRUCTURE SUFFICIENT AMOUNT OF FREE MOVEMENT VERTICALLY AND ALSO IN A HORIZONTAL PLANE.

THE **TOP SIDE COVER SEAL** IS TO BE MANUFACTURED FROM A HIGH ELASTICITY, HEAT, AND FLAME RESISTANT SILICONE COMPOUND.

THE **LOWER SIDE GLASS COVER** IS OF A RECTANGULAR BASE SHAPE WITH ROUNDED CORNER SECTIONS. THIS IS THE BASIC SHAPE OF THE ABOVE COVER, THAT IS OF THE SAME PROPORTIONS AND MATCHING EXACTLY IN ALL TECHNICAL AND TECHNOLOGICAL ASPECTS THE TOP SIDE GLASS COVER MOUNTED ABOVE IT. THE COVER IS TO BE MANUFACTURED FROM GLASS HAVING THE SAME PROPERTIES AS THE ONE USED FOR THE MANUFACTURE OF THE FRONT POSITIONED MISSILE GLASS HEAD AND THE OTHER COVER.

THE **LOWER SIDE COVER SUSPENSION UNIT** PARTS ARE TO BE CONSTRUCTED AS INDIVIDUAL UNITS OF A MINIATURE PISTON LIKE ALUMINIUM ALLOY SHAPE. EACH OF THE INDIVIDUAL UNITS IS SPRING LOADED WITH A CALIBRATED STEEL SPRING. THE ABOVE UNITS ARE JOINED TO ONE ANOTHER, THE TOP SIDE GLASS COVER, AND THE SOUND MISSILE FUSELAGE BY SPECIAL ALUMINIUM ALLOY "V" SEGMENTS WITH ORIFICES FOR SPECIAL BOLTS THAT ARE TO BE SECURED WITH SPECIAL NUTS, ALLOWING THE COMPLEX A SUFFICIENT AMOUNT OF FREE MOVEMENT VERTICALLY AND IN A HORIZONTAL PLANE.

THE **LOWER SIDE COVER SEAL** IS TO BE MANUFACTURED FROM A HIGH ELASTICITY, TEMPERATURE, AND FLAME RESISTANT SILICONE COMPOUND. THE TOP SIDE COVER SEAL, THE LOWER SIDE COVER SEAL, AND THE MISSILE GLASS HEAD SEAL ARE MANUFACTURED FROM THE SAME TYPE OF SILICONE COMPOUND WITH EQUAL TECHNOLOGICAL PROPERTIES.

THE **RIGHT WING FLAP** COPIES PRECISELY THE OUTLINES OF THE DRONE'S FUSELAGE. IT IS OF AN IRREGULAR RECTANGLE LIKE SHAPE AND ITS PRIMARY CROSS SECTION SHOWS IT TO BE OF A DOUBLE TRIANGULAR SHAPE. THIS DIRECTIONAL WING FLAP IS TO BE MANUFACTURED FROM KEVLAR (ATM) REINFORCED COMPOSITE. IT IS THE SAME MATERIAL AS USED FOR THE MANUFACTURE OF THE DRONE'S FUSELAGE. THE ABOVE FLAP'S INNER HOLLOW SPACE IS THEN TO BE FILLED WITH EXPANDING FOAM THAT HARDENS.

THE **LEFT WING FLAP** COPIES PRECISELY THE OUTLINES OF THE DRONE'S FUSELAGE AND IS A MIRROR IMAGE OF THE RIGHT WING FLAP. IT IS OF AN IRREGULAR RECTANGLE LIKE SHAPE AND ITS PRIMARY CROSS SECTION SHOWS IT TO BE OF A DOUBLE TRIANGLE SHAPE. THE ABOVE FLAP IS TO BE MANUFACTURED FROM KEVLAR REINFORCED COMPOSITE. IT IS THE SAME MATERIAL AS USED FOR THE MANUFACTURE OF THE DRONE'S FUSELAGE. THIS DIRECTIONAL FLAP'S

INNER HOLLOW SPACE IS TO BE FILLED WITH EXPANDING FOAM THAT HARDENS.

THE **REAR RIGHT SIDE FLAP** EXTENDS OUTWARDS FROM THE DRONE'S FUSELAGE. THIS FLAP IS TO BE MANUFACTURED FROM KEVLAR REINFORCED COMPOSITE OF THE SAME PROPERTIES AS THE MATERIAL USED FOR THE DRONE'S FUSELAGE. THIS DIRECTIONAL FLAP'S INNER HOLLOW SPACE IS TO BE FILLED WITH EXPANDING FOAM THAT HARDENS. THE FLAP IS MOUNTED ON A ROUND SHAPED TURNING MECHANISM, FITTED WITH INNER BEARINGS. IT IS TO BE MANUFACTURED FROM ALUMINIUM ALLOY. THIS PART IS FITTED WITH INNER TEETH. THE MECHANISM IS MOTORISED AND GEARED. IT IS A TYPICAL "FLY BY WIRE" OPERATED SYSTEM. THE SAME REGULATORY SYSTEM IS TO BE APPLIED TO ALL DIRECTIONAL FLAPS ON THE DRONE AND THE SOUND MISSILE.

THE **REAR LEFT SIDE FLAP** EXTENDS OUTWARDS FROM THE DRONE'S FUSELAGE, AND IS THE EXACT MIRROR IMAGE OF THE REAR RIGHT SIDE FLAP. THE ABOVE FLAP IS TO BE MANUFACTURED FROM KEVLAR REINFORCED COMPOSITE OF THE SAME PROPERTIES AS THE MATERIAL USED FOR THE DRONE'S FUSELAGE. THIS DIRECTIONAL FLAP'S INNER HOLLOW SPACE IS TO BE FILLED WITH EXPANDING FOAM THAT HARDENS.

IT IS MOUNTED ON A ROUND SHAPED TURNING MECHANISM, FITTED WITH INNER BEARINGS. IT IS CONSTRUCTED FROM ALUMINIUM ALLOY. THE FEATURE IS ALSO FITTED WITH INNER TEETH. THE MECHANISM IS MOTORISED AND GEARED. IT IS A TYPICAL "FLY BY WIRE" OPERATED SYSTEM. THE SAME REGULATORY SYSTEM IS TO BE APPLIED TO ALL DIRECTIONAL FLAPS ON THE DRONE AND THE SOUND MISSILE.

THE **STABILISER** IS MANUFACTURED FROM KEVLAR REINFORCED COMPOSITE OF THE SAME PROPERTIES AS THE MATERIAL USED FOR THE DRONE'S FUSELAGE. ITS INNER HOLLOW SPACE IS TO BE FILLED WITH EXPANDING FOAM THAT HARDENS. OTHERWISE, IT FORMS ONE UNIT TOGETHER WITH THE DRONE'S FUSELAGE. ITS REAR SECTION INCORPORATES A CUT OUT SEGMENT OF AN IRREGULAR SHAPE THAT MATCHES THE SHAPE OF THE RUDDER THAT IS TO BE MOUNTED INTO IT.

THE STABILISER IS FITTED WITH TWO INTERNALLY MOUNTED TURNING MECHANISMS THAT ARE OF THE SAME KIND AS THE ONE USED FOR THE DIRECTIONAL FLAPS. THESE MECHANISMS ARE MOTORISED AND GEARED. IT IS A TYPICAL "FLY BY WIRE" OPERATED SYSTEM. THE SAME REGULATORY SYSTEM IS TO BE APPLIED TO ALL DIRECTIONAL FLAPS ON THE DRONE AND THE SOUND MISSILE.

THE **RUDDER** IS TO BE MANUFACTURED FROM KEVLAR REINFORCED COMPOSITE OF THE SAME PROPERTIES AS THE MATERIAL USED FOR THE DRONE'S FUSELAGE. ITS INNER HOLLOW SPACE IS TO BE FILLED WITH EXPANDING FOAM THAT HARDENS. IT FITS PRECISELY INTO THE

REAR CUT OUT SECTION FROM THE STABILISER AND IS TO BE MOUNTED INTO ITS FIXING POINTS.

THE RUDDER IS FITTED WITH TWO MATCHING INTERNALLY MOUNTED TURNING POINTS THAT FIT INTO THE FIXING POINTS ON THE STABILISER. THE RUDDER TURNING MECHANISM IS MOTORISED AND GEARED. IT IS A TYPICAL "FLY BY WIRE" OPERATED SYSTEM. THE SAME REGULATORY SYSTEM IS TO BE APPLIED TO ALL DIRECTIONAL FLAPS ON THE DRONE AND THE SOUND MISSILE.

THE **PARACHUTE**; NO EXTRA ORDINARY TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE PARACHUTE. ITS SIZE WOULD BE CALCULATED FROM THE EXACT DIMENSIONS AND WEIGHT OF THE COMPLETE DRONE/SOUND MISSILE. ANY OTHER TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY APPLIED IN PARACHUTE DESIGNS OF A SIMILAR NATURE ALREADY IN USE.

THE **PARACHUTE COMPARTMENT** IS TO BE MANUFACTURED IN ONE PIECE WITH THE DRONE'S FUSELAGE FROM KEVLAR (ARM) REINFORCED COMPOSITE. NO TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE PARACHUTE COMPARTMENT, EXCEPT THAT ITS SIZE MUST BE SUFFICIENT TO STORE THE DESIGNED PARACHUTE, ITS THRUST CHARGE, AND THE RELATED EQUIPMENT.

THE **PARACHUTE EXPLOSIVE THRUST CHARGE**; NO TECHNICAL REQUIREMENTS OR LIMITATIONS OF AN EXTRA ORDINARY NATURE NEED TO BE SPECIFIED FOR THE PARACHUTE EXPLOSIVE THRUST CHARGE. ITS TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE AS COMMONLY APPLIED IN DIRECTED EXPLOSIVES CHARGES OF A SIMILAR NATURE ALREADY IN EXISTENCE. THE EXPLOSIVE CHARGE MUST BE IN ADDITION CAPABLE OF RETAINING STABILITY THROUGHOUT THE FULL RANGE OF THE DRONE'S FLIGHT PATTERNS, RESISTANT TO HEAT, AND SHOCK.

THE **DRONE THRUST TURBINE ENGINE**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE MENTIONED FOR THE DRONE THRUST TURBINE ENGINE, EXCEPT ITS SIZE IS RESTRICTED BY THE MINIMUM DIAMETER AND LENGTH OF THE SOUND MISSILE FUSELAGE, RESPECTIVELY THE LENGTH AND SECOND LOWER INNER DIAMETER OF THE CARRIER DRONE FUSELAGE. THE KEY FACTOR IS ONE OF FUEL EFFICIENCY OF THE UNIT. REMAINING TECHNICAL REQUIREMENTS AND LIMITATIONS, ARE ONLY THOSE, COMMONLY APPLIED IN DESIGNS OF THRUST TURBINE ENGINES ALREADY IN EXISTENCE.

THE **DRONE THRUST ENGINE EXHAUST**; NO SPECIAL TECHNICAL REQUIREMENTS OR LIMITATIONS NEED TO BE SPECIFIED FOR THE DRONE'S THRUST TURBINE ENGINE EXHAUST. ITS TECHNICAL REQUIREMENTS AND LIMITATIONS ARE ONLY THOSE, COMMONLY

APPLIED IN DESIGNS OF THE ABOVE MENTIONED ENGINES, THAT ARE ALREADY IN USE.

THE **DRONE FUEL TANK**; AS THE DRONE'S FUEL TANK IS ACTUALLY CREATED BY ALTERNATIVE USAGE OF THE OTHERWISE FREE SPACE IN THE DRONE'S FUSELAGE, IT IS CREATED AUTOMATICALLY IN THE MANUFACTURING PROCESS OF THE DRONE'S FUSELAGE. THE FUEL TANK IS MADE FROM THE SAME KEVLAR REINFORCED COMPOSITE. THE FUEL TANK'S INTERNAL WALLING IS PERFORATED BY ORIFICES TO ALLOW FOR A RESTRICTED FLOW OF FUEL FROM ONE CREATED COMPARTMENT TO ANOTHER.

ASIDE FROM THE ABOVE MENTIONED RESTRICTIONS, THERE ARE NO OTHER SPECIFIC CRITICAL TECHNICAL LIMITATIONS THAT HAVE TO BE APPLIED TO THE MANUFACTURE PROCESS OF THE INDIVIDUAL MAIN FEATURES OF THE SOUND MISSILE DEFENCE SYSTEM.

CLAIMS

1. A CLAIM IS MADE IN RESPECT OF A FULLY AUTOMATED DEFENCE SYSTEM, WITH SELF-ACTIVATION AND SELF-LAUNCH CAPABILITY, SUBSTANTIALLY AS DESCRIBED HEREIN.
2. A CLAIM IS MADE IN RESPECT OF A FULLY AUTOMATED DEFENCE SYSTEM WITH OVERRIDING CONTROL BY ARMED SERVICES PERSONNEL.
3. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 AND 2, BUT WITH TOTAL RELIANCE ON SONIC DATA INPUT GATHERED BY THE SOUND ANALYSIS AND RECOGNISANCE TECHNOLOGY CONTAINED WITHIN THE SOUND MISSILE..
4. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 AND 2, NEVERTHELESS TOTALLY OPERATED AND CONTROLLED BY ANY APPROPRIATE AUTHORITY FROM EARTH.
5. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 AND 2, BUT OPERATED AND CONTROLLED BY ANY APPROPRIATE AUTHORITY, FROM ANYWHERE OUTSIDE THE EARTH AND ITS SURROUNDING SPACE, ALTHOUGH THE DEFENDED TERRITORY IS RESTRICTED TO THAT OWNED BY THE OPERATING AND CONTROLLING AUTHORITY.
6. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 AND 2, BUT WITH THE CHOICE OF A REPLACEMENT MISSILE INSTEAD OF THE "AQUARIUS MIC" SOUND MISSILE.
7. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1, 2 AND 6, THAT IS SUPPLEMENTED BY ADDITIONAL EARLY WARNING DATA FROM SATELLITE RECOGNISANCE.
8. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 7, THAT IS SUPPLEMENTED BY DIGITAL IMAGING RECOGNISANCE SYSTEM INTERNALLY MOUNTED WITHIN THE DRONE, OR THE SOUND MISSILE.
9. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 8, THAT IS SUPPLEMENTED BY GROUND SURFACE BASED VARIANTS OF SONIC DATA GATHERING EQUIPMENT THAT PROVIDES THE SOUND DEFENCE SYSTEM COMPLEX WITH ADDITIONAL SONIC DATA COLLECTION.
10. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 9, THAT IS SUPPLEMENTED BY GROUND SURFACE BASED VARIANTS OF IMAGING DATA GATHERING EQUIPMENT THAT PROVIDES THE SOUND DEFENCE SYSTEM COMPLEX WITH AN ADDITIONAL SOURCE OF IMAGING DATA COLLECTION.
11. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 10, THAT IS SUPPLEMENTED BY EARLY WARNING SYSTEM THAT PROVIDES THE SOUND MISSILE DEFENCE SYSTEM WITH ADDITIONAL SATELLITE IMAGING DATA COLLECTION THAT IS GATHERED AND PASSED OVER TO THE ABOVE DEFENCE SYSTEM FROM ANYWHERE.
12. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 11, THAT IS SUPPLEMENTED BY GROUND SURFACE BASED SOUND MISSILE LAUNCHING BATTERIES.

13. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 11, THAT IS SUPPLEMENTED BY SOUND MISSILE LAUNCH BATTERIES BASED ANYWHERE AT SEA.
14. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 12, THAT IS SUPPLEMENTED BY SOUND MISSILE LAUNCH BATTERIES BASED ANYWHERE AT SEA.
15. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 11, THAT IS SUPPLEMENTED BY SOUND MISSILES LAUNCHED FROM ANY KIND OF AIRCRAFT, WHETHER FROM AN INTERNALLY, OR AN EXTERNALLY LOCATED LAUNCH MECHANISM.
16. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 14, THAT IS SUPPLEMENTED BY SOUND MISSILES LAUNCHED FROM ANY KIND OF AIRCRAFT, WHETHER FROM AN INTERNALLY, OR AN EXTERNALLY LOCATED LAUNCH MECHANISM.
17. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 11, THAT IS SUPPLEMENTED BY SOUND MISSILES LAUNCHED FROM ANY KIND OF MOBILE, OR STATIONARY VEHICLES.
18. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 16, THAT IS SUPPLEMENTED BY SOUND MISSILES LAUNCHED FROM ANY KIND OF MOBILE, OR STATIONARY VEHICLES.
19. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 16, THAT IS SUPPLEMENTED BY SOUND MISSILES LAUNCHED FROM ANY KIND OF MOBILE, OR STATIONARY LAUNCH PLATFORMS.
20. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 16, THAT IS SUPPLEMENTED BY SOUND MISSILES LAUNCHED FROM ANY KIND OF MISSILE LAUNCH SILOS.
21. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 20, THAT IS WIRELESSLY NETWORKED TO AVOID THE NEED FOR A COMMAND CENTRE.
22. A DEFENCE SYSTEM IS CLAIMED, AS CLAIMED IN CLAIMS 1 TO 20, THAT IS CONFIGURED TO LEAVE THE OVERRIDING CONTROL OF OPERATIONS WITH AN OFFICE, OR PERSON(S) DISTANT FROM THE COMMAND CENTRE OR THE NETWORK CONFIGURATION.
23. A SELF GUIDED MISSILE IS CLAIMED, WHOSE AIMING SYSTEM OPERATES ON RECEPTION, ANALYSIS, DIGITALISATION, AND COMPARISON OF SONIC DATA, SUBSTANTIALLY AS DESCRIBED HEREIN, INCORPORATING THE TECHNOLOGY ABLE TO COLLECT SOUND WAVES BY FUNCTIONING AS A MICROPHONE.
24. A SELF GUIDED MISSILE IS CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN, WITH THE TECHNOLOGY ABLE TO COLLECT SONIC DATA BY FUNCTIONING AS A MICROPHONE AND THE ABILITY TO AMPLIFY THIS DATA.
25. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 AND 24, THAT INCORPORATES THE TECHNOLOGY ABLE TO CONVERT THE AMPLIFIED DATA INTO DIGITAL FORMAT.
26. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 25, THAT HAS THE TECHNOLOGY ABLE TO CONVERT DIGITAL SONIC DATA INTO A GRAPHICAL FORMAT THAT IS USED BY THE RECOGNITION AND AIMING SYSTEM OF THE SOUND MISSILE LIKE A FINGERPRINT.

27. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 26, THAT INCORPORATES THE TECHNOLOGY ABLE TO STORE SONIC DATA IN GRAPHICAL FORMATS, THAT ARE TO BE USED BY THE RECOGNITION AND AIMING SYSTEM OF THE SOUND MISSILE LIKE FINGERPRINTS.
28. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 27, THAT HAS THE TECHNOLOGY ABLE TO COMPARE SONIC DATA IN GRAPHICAL FORMATS IN ORDER TO DIAGNOSE A PERCENTAGE MATCH IN RESPECT OF THE ANALYSIS OF SONIC DATA EMITTED BY A SOURCE IDENTIFIABLE AS THE POSSIBLE TARGET.
29. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 28, THAT INCORPORATES THE TECHNOLOGY ABLE TO TRANSMIT THE CONVERTED SONIC DATA FROM THE SOUND MISSILE TO THE COMMAND CENTRE.
30. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 28, THAT INCORPORATES THE TECHNOLOGY ABLE TO TRANSMIT THE CONVERTED SONIC DATA FROM THE SOUND MISSILE TO OTHER DRONES/SOUND MISSILES.
31. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 29, THAT INCORPORATES THE TECHNOLOGY ABLE TO TRANSMIT THE CONVERTED SONIC DATA TO ANY PLACE, OR TO ANY AUTHORITY.
32. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 31, THAT POSSESSES THE SUPPLEMENTARY TECHNOLOGY ABLE TO COLLECT IMAGING DATA.
33. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 32, THAT POSSESSES THE SUPPLEMENTARY TECHNOLOGY ABLE TO CONVERT IMAGING DATA TO DIGITAL FORMAT.
34. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 33, THAT POSSESSES THE SUPPLEMENTARY TECHNOLOGY TO STORE IMAGING DATA IN DIGITAL FORMAT.
35. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 34, THAT INCORPORATES THE TECHNOLOGY ENABLING IT TO COMPARE IMAGING DATA IN DIGITAL FORMATS IN ORDER TO DIAGNOSE A PERCENTAGE MATCH IN RESPECT OF THE ANALYSIS OF IMAGING DATA RECEIVED FROM A SOURCE IDENTIFIED AS THE POSSIBLE TARGET.
36. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 35, THAT INCORPORATES THE TECHNOLOGY ENABLING IT TO TRANSMIT THE CONVERTED DATA TO THE COMMAND CENTRE OR ELSEWHERE.
37. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 35, THAT INCORPORATES THE TECHNOLOGY ENABLING IT TO TRANSMIT THE CONVERTED DATA TO OTHER DRONES/SOUND MISSILES, AS WELL AS TO RECEIVE SUCH DATA FROM THE OTHER DRONES/SOUND MISSILES.
38. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 36, THAT INCORPORATES THE TECHNOLOGY ENABLING IT TO TRANSMIT THE CONVERTED DATA TO OTHER DRONES/SOUND

MISSILES, AS WELL AS TO RECEIVE SUCH DATA FROM THE OTHER DRONES/SOUND MISSILES.

39. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 38, THAT INCORPORATES THE TECHNOLOGY ENABLING IT TO INITIATE ITS OWN LAUNCH SEQUENCE BASED ON THE PERCENTAGE VALUE RESULT OF THE DATA COMPARISON PROCESS.
40. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 38, THAT CAN BE LAUNCHED ON COMMAND FROM A COMMAND CENTRE OR OTHER SPECIFIED REMOTE LOCATION.
41. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 39, THAT CAN BE LAUNCHED ON COMMAND FROM A COMMAND CENTRE OR OTHER SPECIFIED REMOTE LOCATION.
42. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 41, THAT COLLECTS SONIC VIBRATIONS BY MEANS OF A SUSPENDED GLASS HEAD THAT IS CAPABLE OF MOVEMENT THAT CAN BE FINITELY MEASURED.
43. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 42, THAT IS SUPPLEMENTED BY COLLECTING ADDITIONAL SONIC VIBRATIONS BY MEANS OF A SUSPENDED LOWER SIDE GLASS COVER THAT IS CAPABLE OF MOVEMENT THAT CAN BE FINITELY MEASURED.
44. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 42, THAT IS SUPPLEMENTED BY COLLECTING ADDITIONAL SONIC VIBRATIONS BY MEANS OF A SUSPENDED TOP SIDE GLASS COVER THAT IS CAPABLE OF MOVEMENT THAT CAN BE FINITELY MEASURED.
45. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 43, THAT IS SUPPLEMENTED BY COLLECTING ADDITIONAL SONIC VIBRATIONS BY MEANS OF A SUSPENDED TOP SIDE GLASS COVER THAT IS CAPABLE OF MOVEMENT THAT CAN BE FINITELY MEASURED.
46. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 43, THAT PROTECTS ITS INTEGRAL TECHNOLOGY BY MEANS OF A VACUUM CREATED WITHIN THE MISSILE GLASS HEAD.
47. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 45, THAT PROTECTS ITS INTEGRAL TECHNOLOGY BY MEANS OF A VACUUM CREATED WITHIN THE MISSILE HEAD THAT IS MANUFACTURED OF ANY ALTERNATIVE MATERIAL.
48. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 47, THAT INCORPORATES, WITHIN THE STRUCTURAL DESIGN OF THE MISSILE HEAD, SIXTEEN TUBULAR AIR INTAKES.
49. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 47, THAT INCORPORATES, WITHIN THE STRUCTURAL DESIGN OF THE MISSILE HEAD, ANY NUMBER OF AIR INTAKES OF ANY SHAPE.
50. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 49, THAT IS ABLE TO INITIATE ITS OWN SELF-DESTRUCTION ON THE BASIS OF DATA ANALYSED WITHIN ITS SYSTEMS, OR IN AN EVENT OF A MALFUNCTION THAT MAY LEAD TO DISASTER.

51. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 50, THAT HAS TWO TANKS CONTAINING DIFFERENT FUEL TYPES, SEPARATED BY A CYLINDRICAL FUSELAGE SECTION LEADING AIR THROUGH THE MISSILE FUSELAGE.
52. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 51, THAT INCORPORATES AIR INTAKES THAT LEAD AIR FROM THE HEAD AIR INTAKES, THROUGH AIR TUNNELS IN THE MISSILE FUSELAGE, EXITING AT THE REAR SECTION OF THE MISSILE FUSELAGE AROUND THE EXHAUST.
53. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 52, WITH NO NEED TO CARRY AN EXPLOSIVE WARHEAD TO DESTROY A TARGET, WHERE THE WARHEAD IS SUBSTITUTED BY THE TWO INCORPORATED TYPE FUEL TANKS THAT EXPLODE TOGETHER ON IMPACT WITH THE TARGET CREATING A FORCE SUFFICIENTLY DESTRUCTIVE TO ELIMINATE ANY FLYING OBJECT.
54. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 53, WITH AN OUTER CASING MANUFACTURED OF TITANIUM WITH AN INNER ISOLATED LAYER OF SODIUM FOR COUNTERING THE FRICTION FORCES CREATED BY HIGH SPEEDS, THUS FOR COOLING PURPOSES OF THE MISSILE FUSELAGE.
55. A SELF GUIDED MISSILE IS CLAIMED, AS DESCRIBED IN CLAIMS 23 TO 54, WHERE THE OPERATOR USES IT OR AMENDS IT FOR USE AS A WEAPON OF ATTACK.
56. MISSILE DIRECTIONAL FLAPS ARE CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN, MANUFACTURED AS A HOLLOW TITANIUM STRUCTURE FILLED WITH SODIUM FOR COUNTERING THE EFFECTS OF FRICTION FORCES, THUS COOLING THE MISSILE FLAPS.
57. MISSILE DIRECTIONAL FLAPS ARE CLAIMED, AS DESCRIBED IN CLAIM 56, WHERE THE FLAPS ARE CONNECTED TO THE MISSILE FUSELAGE BY MEANS OF A MOTORISED ROUND SHAPED GEARED MECHANISM ALIGNED TO THE CENTRAL AXIS OF THE MISSILE FLAP, ENABLING THE TURNING OF THE MISSILE FLAPS FOR ALTERING OF THE MISSILE FLIGHT DIRECTION AT A MINIMAL LEVEL OF STRESS FORCES THAT AFFECT THE TURNING MECHANISM.
58. A MISSILE CARRIER DRONE IS CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN, FULLY OPERATED AND DIRECTED BY THE ANALYSIS, RECOGNISANCE, AND TARGET AIMING TECHNOLOGY LOCATED WITHIN THE SOUND MISSILE HEAD.
59. A MISSILE CARRIER DRONE IS CLAIMED, AS IN CLAIM 58, BUT WITH THE TECHNOLOGY ENABLING IT TO BE OPERATED AND CONTROLLED FROM A COMMAND CENTRE.
60. A MISSILE CARRIER DRONE IS CLAIMED, AS IN CLAIMS 58 AND 59, WITH THE ABILITY TO BE OPERATED AS AN AIRBORNE MISSILE LAUNCH PLATFORM.
61. A MISSILE CARRIER DRONE IS CLAIMED, AS IN CLAIMS 58 TO 60, WITH THE ADDITIONAL FACILITY OF BEING ABLE TO BE BROUGHT TO GROUND BY PARACHUTE TO MINIMISE DAMAGE AND COST OF REPLACEMENT.

62. A MISSILE CARRIER DRONE IS CLAIMED, AS DESCRIBED IN CLAIMS 58 TO 61, WITH THE ABILITY TO BRING THE DRONE/SOUND MISSILE TO GROUND BY PARACHUTE TO MINIMISE DAMAGE AND COST OF REPLACEMENT.
63. A DEFENCE SYSTEM, SUBSTANTIALLY AS DESCRIBED HEREIN, WHERE THE OPERATOR(S) CONFIGURE IT FOR USE AS A SYSTEM INTENDED TO BE PRIMARILY OF AN ATTACK NATURE.
64. A DEFENCE SYSTEM IS CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN.
65. A SOUND MISSILE IS CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN.
66. A MISSILE CARRIER DRONE IS CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN.
67. A FORCE ANALYSIS UNIT IS CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN.
68. MISSILE DIRECTIONAL FLAPS ARE CLAIMED, SUBSTANTIALLY AS DESCRIBED HEREIN.

Application No:	GB 0119627.8	**Examiner:**	David J Evans
Claims searched:	1 - 22 & 63	**Date of search:**	23 January 2003

Patents Act 1977 : Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance	
X	1-22 at least.	GB 2356995 A	(ROKE MANOR RESEARCH LTD). whole document of interest.
X	1-22 at least.	GB 2230845 A	(DYNAMIT NOBEL) especially see figs 4, 6 & 7.
X	1-22 at least.	GB 2136097 A	(SIEMENS) whole document of interest.
X	1-22 at least.	WO 0912997 A1	(THOMSON) see figs 4a, 4b and abstract translation.
X	1-22 at least.	US 5464174 A	(LAURES) whole document of interest, in particular see figs 1 & 2.
X	1-22 at least.	US 5340056 A	(GUELMAN) whole document relevant, see fig 4.
X	1 at least.	DE 19610770 A	(FRYEN) refer to abstract translation.
X	1 at least.	DE 4225233 A	(STERZELMEIER) see abstract translation.
X	1 at least.	FR 2760080 A	(DESGIGOT) refer to abstract translation.
X	1 at least.	FR 2622964 A	(DUAND) see abstract translation.

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC[V]:

F3C

Worldwide search of patent documents classified in the following areas of the IPC[7]:

B63G; F41F; F41G; F41H

The following online and other databases have been used in the preparation of this search report:

EPODOC, WPI & PAJ.

BNSDOCID: <GB_____2380244A__I_>